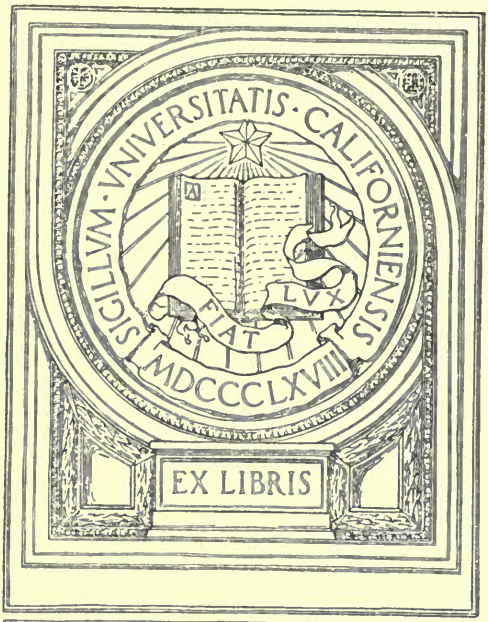
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UNITED STATES

EXPLORING EXPEDITION.

GROUPS
IN THE WESTERN PART
OF THE
PACIFIC OCEAN
EXAMINED AND SURVEYED
BY THE
U.S. Ex. Ex.
NOTE.
Vincennes
Peacock
Relief
Porpoise
Flying Fish
160
165
170
10°
5°
0°
Browns Range
Udia milai or Escholtz I.
Korsakoff I.
Pescadores
Bigar
Oudirick
Tagia
Ailow
Miadi
Temo
Otdia
Eregup
Kawen
Aour
Schantz I.
Kabahaia
Island
Legiep I.
Casbodas I.
I. Arecifos
Ancrifs I.
Kwadelen or Catherine I.
Namou or Patterson I.
Tebut
Odia or Musquitto I.
Helut or Elmore I.
Arrowsmiths I.
Daniel I.
Pedder I.
Mulgrave Is
Bordelaise I.
Larkins Reef
St Augustine I.
Ascension I.
Duperrey Is
Is Ngaruik
Mt Askill Is
Teyoa I.
Valan I.
Hope Island
Banham I.
Baring I.
Hunter I.
Boston I.
Covet Is
Monteverde Is
Makin or Pitts I.
Apia or Charlotte I.
Tarawa or Knox I.
Maiana or Halls I.
Kuria or Woodle I.
Nanouki or Henderson I.
Nanouti
Bishop or Syden
Atlantique
Pleasant I.
Ocean I.?
Nameless
Meek
Cocos I.
Is de Mortlock
Carteret Is
Willey Group
Howes Group
Reef
Candelaria Bank
Roneador Reef
I. Bougainville
C. Cornwallis
I. Choiseuil
I. Isabel
C. Allen
C. Middleton
C. Eddystone
C. Satisfaction
I. Nairn
Is Ortega
I. Ramos
Gower I.
Carteret
Simson I.
I. des Arsacides
Galera I.
Buenavista I.
Smiths I.
I. de la Princesse
I. Georgie
I. Murray
I. Guadalcanar
Three Sisters
Is de Golfe
Catalina I.
S. Christsoval
Poclington Shoal
Bellona I.
Rennel I.
Wells Reef
Indespensible Reef
Jesus I.
Kennedy I.?
Duff Is
Mondana I.
Tinikora I.
Metema I.
I. Nitendi
I. Toupoua
Is Vanikoro
Anouda I.
Mitre I.
Fataka
I. Tikopia
Pandora Ree
North Rocks
Bligh I.
Banks I.
Sugar loaf
Pic de Letoile
I. de Esprit
RADACK ISLES
CAROLINE ISLANDS
SOLOMON ISLANDS

175
180
175
170
10°
5°
0°
5°
10°
10th Decr 1841
Reef
Barber I.
1st Sepr 1841
1st Octr 1839
Jervis I.?
Worth Island
Sand I.
New Nantucket
Newmarket I.
Tamana or Phebe I.
Reef ?
Peru or Francis I.
Nukunau or Byron I.
Onoutu or Rotcher I.
Arurai or Hurd I.
1st April
Mt Keans I.
Arthur I.
Enderby's I.
Birnie I.
PHŒNIX GROUP
Hulls I.
Sidney I.
Gardners I.
8th Jan
1st Sepr 1840
S. Augustin I.
Gran Cocal
Speidens I.
Hudson I.
ELLICES GROUP
Nederlandisch I.
Island
Oaitupu or Tracy I.
Nukufetau or Depeysters I.
Funafute or Ellices I.
Mitchell I.?
Oatafu or Duke of York I.
Nukunono or Duke of Clarence I.
Fakaafo or Bowditch I.
Byron I.?
Independence I.
Solitaire I.
Swains I.
1st Febr
12th Sepr 1840
Bayonnaise Bank
Rotuma I.
SAMOAN GROUP
Novr 11th 1839
Savaii I.
Upolu
Tutuila I.
Ofoo
Oloosinga
Manua I
Rose I.
Uea or Wallis I.
Horne I.

NARRATIVE

OF THE

UNITED STATES

EXPLORING EXPEDITION.

DURING THE YEARS

1838, 1839, 1840, 1841, 1842.

BY

CHARLES WILKES, U. S. N.

COMMANDER OF THE EXPEDITION,

MEMBER OF THE AMERICAN PHILOSOPHICAL SOCIETY, ETC.

IN FIVE VOLUMES, AND AN ATLAS.

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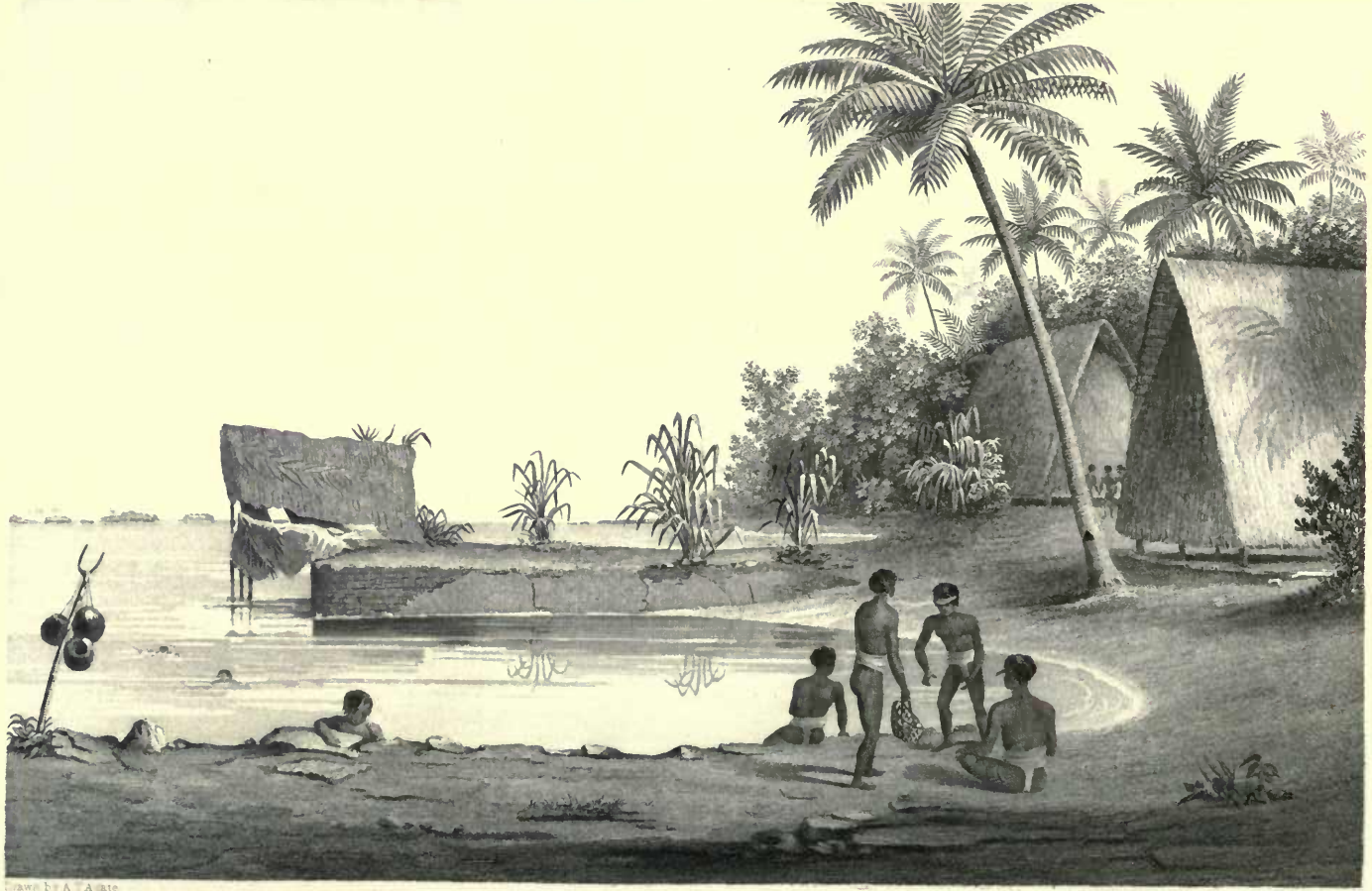

Drawn by A. T. Agate.

W. B. Tucker Sc.

NARRATIVE

OF

THE EXPLORING EXPEDITION.

CHAPTER I.

BOWDITCH ISLAND.

1840.

As has before been stated, the Peacock and Flying-Fish left Oahu on the 2d December, 1840, under instructions which will be found in Appendix VIII., Vol. IV. They steered off to the southward until they reached the latitude of 5° N., and longitude 160° W., a position in which it was thought that an island existed. This position was carefully examined, until they were satisfied that there was no land at or near the locality. They then steered for Washington Island, known on the chart of Arrowsmith as New York Island, which was found and surveyed. Its position is in latitude 4° 41′ 35″ N., and longitude 160° 15′ 37″ W. It is three and a quarter miles long by one and a fourth wide, and is entirely covered with cocoa-nut and other trees, exhibiting a most luxuriant growth. There is a reef off its eastern point, which extends for half a mile. At the western end, a coral ledge extends two miles in a northwest-by-west direction, on which the water appears much discoloured, but the sea was not seen to break upon it, except close to the point of the island. The island is elevated about ten feet above the sea. The surf proved too heavy to allow of

their landing, and the island affords no anchorage. While off this island, the current was found setting to the northeast, at the rate of twelve miles in the twenty-four hours.

The positions in this neighbourhood where five islands have been reported to exist, were diligently searched for eight days; but no land was seen, and Captain Hudson became satisfied that none but Washington Island is to be found.

On the 20th December, they made Jarvis's Island, in latitude 0° 22′ 33″ S., and longitude 159° 54′ 11″ W. This is a small coral island, triangular in shape, a mile and three-fourths in length east and west, and a mile wide north and south. It exhibits the appearance of a white sand-beach, ten or twelve feet above the sea, without a tree or shrub, and but a few patches of grass. The sea breaks violently around its shores, but no reef extends to any distance from the island, which may be closely approached. A few sea-birds were seen about the island. No landing could be attempted, the surf being too heavy. Captain Hudson considers this a dangerous island for navigators.

The Peacock and Flying-Fish, for the next fifteen days, were engaged in searching for Brooks's Island, Clark's Reef and various shoals; but without success, and, after examining the neighbouring sea, left the locality, fully satisfied that if any islands or shoals had existed, in or near the places assigned to them, they must have been seen. They experienced here a current, setting to the westward at the rate of a mile an hour. Captain Hudson remarked, that although they had experienced generally a current setting to the westward, yet, almost invariably, the current-log gave a contrary result.

In latitude 2° 55′ S., longitude 160° 26′ W., they found, by the dipping-needle, that they had reached the magnetic equator, which they followed until they reached longitude 171° W.

On the 9th January, 1841, they made Enderbury's Island, of the Phœnix Group, which has before been spoken of, as seen in the route of the Vincennes from the Feejee to the Sandwich Islands.

On the 11th, they made and surveyed Birnie's Island, which lies southwest from Enderbury's, in latitude 3° 34′ 15″ S., longitude 171° 33′ W. It has an elevation of no more than six feet above the sea; is about one mile long and a quarter of a mile wide, trending about northwest and southeast. It is but a strip of coral, apparently uplifted, and is exceedingly dangerous for vessels, as it cannot be seen from a distance, and a vessel, in thick weather, would scarcely have time to avoid it after it was discovered.

A number of islands and reefs, reported to exist, were searched for in this neighbourhood, viz.: Mary Balcout's, Brothers', Robertson's,

Phœnix, Harper's, and others, laid down, but not named, all of which are believed to have no existence whatever.

On the 17th January they made Hull's Island, which has already been described, and was surveyed by the Vincennes. The party of Tahitians employed in taking turtles had left it. Captain Hudson, believing this to be Sydney Island, ran off forty-five miles to the westward, for Hull's Island, but, of course, saw nothing of it, as it lies that distance to the eastward, in the same latitude.

The position of an island supposed to exist in latitude 5° 23′ S., and longitude 173° 25′ W., was passed, but no signs of land were seen. They then ran over the supposed place of Fletcher's Island, in latitude 7° 02′ S., longitude 173° 22′ W., without seeing any shoal, island, or reef.

The effects of the rainy season were now felt in these latitudes, in sudden gusts of wind, with torrents of rain, that continued for a few hours of the night, and cleared up partially towards sunrise, after which the weather continued cloudy throughout the day, with squalls visible in various parts of the horizon. Our experience corroborated the generally conceived idea that this kind of weather usually occurs near small islands; but that these isolated spots, of such comparatively small size, can exert so great an influence in arresting and condensing the vapour, is not to me a satisfactory explanation. I am rather inclined to believe that it results more from the fact of the high temperature of the ocean in the neighbourhood, it being here nearly 90°, or several degrees greater than that of any other part of the ocean; consequently, the evaporation would go on much more rapidly, which, becoming condensed in the higher portion of the atmosphere, is again thrown down in copious streams at night. This is particularly the case when the trade-winds are interrupted, that would otherwise carry off the vapour. As far as respects the interrupting or arresting the flow of currents, these islands may exert some influence; but the main cause I should be inclined to impute to the high temperature acquired by the water in consequence of there being no currents.

The next day they proceeded to the Duke of York's Island, which they made on the 25th, in latitude 8° 36′ S., longitude 172° 23′ 52″ W. This is a lagoon island, of coral formation: its length east and west is three miles, and its width two and a half miles, north and south. There is no passage into the lagoon; the sea breaks on the reef with violence; but at high water a boat may pass over without difficulty, if proper care is taken. The islets that have been formed on the reef are eight or ten feet above the water, and are covered with cocoa-nut and pandanus trees.

As they approached the island, three double canoes were seen coming towards the ship, but with great caution; the mizzen-topsail was backed to allow them to come up, which they did, singing and shouting, making many gestures, and waving pieces of matting. A white flag was waved in return, and various articles exhibited to induce them to come alongside, which they at last did; but no inducement could prevail on them to come on board.

The canoes were all double, made of pieces of wood sewed together like those of Samoa, and were ornamented in like manner with white ovula-shells. The blades of their paddles also resembled those of the Samoans, being oblong and slender. The colour and features of these people showed that they belonged to the Polynesian race, and it was observed there was little or no difference between their appearance and that of the Samoans, to which dialect their language was allied. A Samoan who was on board the Peacock could partially understand them, but not unfrequently was entirely at a loss; Mr. Hale, however, was enabled to comprehend many of the words. It appeared that their refusal to come on board proceeded from the singular apprehension that the ship would be lifted out of the water, and taken up to the sky, from which they believed she had descended. Some few of them got as far up as the gangway, one of whom had an ulcerated arm, which he desired might be cured.

In each canoe there were ten men, who wore the maro, which was braided like matting. On their head was a piece, made in some cases of matting, in others of tortoise-shell, and occasionally this ornament resembled an eye-shade, or the front of a cap, to protect the face from the sun; their hair was cut short, and was the same in character as that of the Polynesians; they wore necklaces of shells, and small pieces of sponge, and wreaths of pandanus-leaves around the neck. Only one of those in the canoes seemed to be a person of note: in his shade were stuck several of the tail-feathers of the tropic-bird. A plane-iron and some blue beads were seen in their possession: this, with their knowledge of trade and desire of carrying it on, proved that they had before had intercourse with ships. They exhibited great expertness in showing off their various articles to view, and were very eager to sell in order to obtain our articles.

They had matting, nets, fish-hooks of bone, wooden boxes, paddles, and miniature canoes. Whilst the bartering was going on, the ship fired a great gun, for the base by sound, with the tender. This created much consternation, and they all scrambled into their canoes under strong excitement, making a prodigious clamour, seized their paddles, and pulled for the island, in great trepidation.

After the natives had thus made a precipitate retreat, the boats were lowered, and a large party proceeded to land at the nearest point. The landing was effected on the coral shelf with some difficulty, and they found the natives, who had come alongside, ready to receive them, with every sign of friendship. They had apparently recovered from their alarm, and met the officers before they reached the beach, greeting them by rubbing noses and throwing their arms around their necks. Their excitement seemed to be so great that it was difficult for them to continue still for a moment, distracted by the numerous novel things around them. Some of them, however, were exceedingly shy, and would not suffer themselves to be approached; others had greater confidence, but at the same time showed a respectful fear; while a few put their arms round the officers' necks, and exhibited a boldness devoid of dread of any kind. The latter urged the party to accompany them to their village. These different states of feeling were associated with a peculiar mode of singing, which they would continue for some time, during which nothing could induce them to stop; this ended, their astonishment and excitement would again appear to find relief in vociferating with great volubility for several minutes, at the end of which they would break out in a hearty laugh, without the least apparent cause. These islanders are tattooed on the cheeks, breast, legs, and above the hips.

A part of these marks consisted of two rows of lines running from the tip of the ear across the cheek and nose, with small crosses between. There were others passed around the body below the chest; many marks resembling fish were on the arms, and a sort of triangle, together with figures of turtles, on the breast. On the legs were many concentric rings. The markings were distinct and peculiar.

Their village, to which our party went, was on the inner or lagoon side of the island, and contained about thirty houses, which were raised about a foot above the surrounding earth: they were of oblong shape, about fifteen feet high to the ridge-pole, sloping gradually, and of a convex form to within two or three feet of the ground; the roof was supported on high posts, whilst the lower part rested on short ones, three feet within the eaves, having a strong piece extending around, on which the rafters are tied; the gable-ends were overtopped by the roof, and seemed necessary to protect them from the weather. Below the eaves, the whole was open from the ground to the roof. The thatching, made of pandanus-leaves, was of great thickness, and put on loosely. The interior of the houses was very clean, but there was no furniture except a few gourds, and a reclining

stool, cut from a solid block of wood, having two legs at one end, which inclined it at an angle of nearly forty-five degrees: to show the manner of lying in it, they imitated a careless and comfortable lounge, which they evidently considered a luxury. It was conjectured that they had removed their various household utensils to a secret place.

The most remarkable constructions of the islanders near the village, were three small quays, five or six feet wide, and two feet above the water, forming slips about ten feet wide: at the end of each of these was a small house, built of pandanus-leaves, partly on poles in the water. These appeared to be places for securing their canoes, and for the purpose of keeping their fishing implements. Three canoes were seen lying a short distance off in the lagoon, filled with the women and children. This was a precaution adopted to enable them to escape if it became necessary; yet they did not seem to apprehend any hostility. No kind of war implements was observed among them, and their bodies exhibited no marks of strife with each other.

There was an open space in the town, covered with coral-sand and pebbles, which they called malæ. When they were asked by Mr. Hale for their "fale atua," (house of God,) they pointed to a place at a distance, and evidently understood the meaning of the question.

There was no cultivation whatever, and their only food appeared to be the cocoa-nut and fish. There were no animals seen, no fowls, dogs, or hogs. Captain Hudson left there a few young pigs, of which the natives took charge, but they did not evince that surprise which was expected at the sight of an unknown animal.

They have no water on the island, and the supply is wholly obtained from excavations made in the body of the cocoa-nut trees, two feet from the ground. These trees are all dug out on the lee side, towards which all are more or less inclined. These excavations are capable of containing five or six gallons of water.

Our gentlemen were under the impression that they saw the whole population, and counted forty male adults, which, on the supposition that they were one-third, would make the population one hundred and twenty.

This island was discovered by Byron, in 1765, who reported it as destitute of inhabitants. The natives gave the name of their island as Oatafu, and acknowledged themselves the subjects of a chief who lived on a neighbouring island, called Fakaafo, pointing to a southerly direction. With this exception, they did not appear to possess the knowledge of any other islands but their own.

Their idea was that the ship had come from the sky, and that the officers were divinities; the question whether they were so was constantly repeated, and although every endeavour was made to convince them to the contrary, yet the disclaimer produced no effect. Their continual singing and chaunting was supposed to arise from the desire to propitiate us.

When a number of the officers had collected in the malæ, the two oldest of the men, seating themselves on the ground, with two short sticks, commenced chaunting and drumming on a large stick, whilst another wrapped a net about his middle, and began to dance: the more they were interrupted, the more vigorous became their efforts, both in the song and dance.

These islanders were thought by all to be a docile, harmless people, although they possessed, in common with all other savages, a strong propensity to theft. Many of the officers lost small articles out of their pockets, which were no doubt taken at the time of their affectionate embraces. Just as they were leaving the island, a hatchet was missed, which was supposed to be stolen; on the loss being made known to them, a prodigious excitement ensued. The old chief, or he who had been pointed out as the "alike," jumped up with much energy, and made a speech with a stentorian voice and excessive volubility, while his whole frame was agitated. The natives immediately separated in all directions, and in a short time the missing hatchet was produced.

They had no knowledge of the use of tobacco, so general among the other islanders of Polynesia, and when shown some, they made signs to know if it was edible. On being given a cigar, they examined it very closely, and being induced to light it, attempted to imitate the motions of smoking; but instead of drawing in the breath to ignite it, pursued a directly opposite course, and very soon returned it with some agitation, apparently rejoiced to get rid of it. The natives accompanied them in a body to the beach, and saw them safely into the boats.

Dip and intensity observations were made here; they likewise had a perpendicular cast of the lead, half a mile from the shore, with three hundred fathoms; but they found no bottom.

Nineteen varieties of trees were found, some of which were of a large growth; among which were seen large Tournefortia, covered with Asplenium and Polypodium, species of ferns, which gave it quite a venerable appearance; a pandanus more than thirty feet high. A tree, believed to be a Pisonia, was more than twenty feet in circumference at its base, and about forty feet high. A beautiful species of

ficus, the Cape jessamine of Tahiti, and the "nono," used as a dye, were both growing wild.

Some tame oceanic pigeons, plovers, and a noddy, were seen about their town, with numerous water-fowl, but no land-birds. Rats were numerous, as was also a large black lizard.

On the 26th, the vessels sailed for the Duke of Clarence Island, but, owing to the unfavourable state of the weather, they did not reach it until the 28th, though only a few miles distant, when it was surveyed, and found to be seven and two-tenths miles long, in a north and south direction, and five miles wide from east to west. It is of a triangular shape, with the apex to the north. It has a lagoon similar to that of the Duke of York's, with islets in it; the northwest side is a bare reef, or wash, on which the sea breaks heavily. After the survey was effected, Captain Hudson found it impossible to land to hold communication with the natives, but has no doubt of its being inhabited, as it was spoken of by the inhabitants of the Duke of York's Island as belonging to the same people, and was called by them Nukunono. No opening was perceived into the lagoon, and there were many cocoa-nut and other trees on the island.

On the 28th, in the afternoon, they bore away for the purpose of looking for the islands of Gente Hermosas of Quiros. During the night the weather was squally, with heavy rain, accompanied with thunder and lightning; and it is a source of regret, that at this time the rain-gauge was out of repair, and no observations were made as to the quantity which fell, or its temperature.

At $2^h\ 30^m$ A. M., whilst Lieutenant Emmons had the deck, the night being very dark, and the weather clear, he heard the distant sound of surf; soon afterwards the wind changed, when land was discovered close to the vessel, bearing northeast. They made signal to the tender, and hove-to till daylight, when the largest island they had yet seen was within two miles of the ship.

This proved to be a new discovery, as it was not to be found on any chart. The island, which I have named Bowditch, agreeably to the wish of Captain Hudson, was of coral formation, and its shape is that of a triangle, with the apex to the south. From north to south it is eight miles long, and in width, from its west point, four miles. On its southwest and north points the land is of considerable elevation, and the more elevated parts are connected by an extensive coral reef, that is awash. On the east side the land is more continuous, and on three parts there are extensive groves of cocoa-nut trees and shrubbery. There is no entrance for a vessel to the lagoon, which, from the appearance of the water, has but little depth.

At daylight, eighteen canoes, with four or five persons in each, were seen off the end of the island, apparently on a fishing excursion: they disregarded the vessels altogether, and continued their occupation, without taking any notice of them, and as if unwilling to lose the opportunity of taking the fish. The fish seemed to be extremely numerous, if the actions of the birds were to be taken as an indication, for immense numbers of them were seen darting into and rising from the sea every moment.

As the natives refused to come near the ship, Captain Hudson ordered two boats to be sent to open a communication with them. They were taking fish after the manner of the Samoans, by trolling a line, it being fastened by a pole eight or ten feet long to the stern of the canoes, and elevated above the surface to a sufficient height to allow the fish-hook, which was made of shell or bone, to drag along the surface of the water; as their canoes were propelled, the fish, attracted by the glistening of the hook, eagerly caught at it, and were taken.

The canoes were single, with out-riggers, and resembled those of Samoa, being partly decked over the fore part, and with the same small protuberances or pegs, to which were fastened the ovula-shell. No sails were observed, but a small model of a canoe, purchased among the curiosities, had the usual triangular sail.

UNION GROUP CANOE.

The natives were at first very shy of the boats; but the Hawaiians who were in them, soon induced them to approach, and enter into trade, and finally enticed them alongside the ships. On coming near, they began a song or chaunt, holding up their paddles and mats, and shouting "kafilou tamatau." They resembled the natives of Oatafu, or Duke of York's Island, wore the same kind of mats, eye-shades, and ornaments, and some were tattooed after the same manner. Some, however, were tattooed in a different style, being ornamented with a variety of arrows on the forehead and cheeks. They were all finely formed, and manly in appearance, with pleasing countenances that expressed good-nature.

They seemed eager enough for trade, and soon disposed of all they had to exchange; a few presents were also made them, but all inducements failed to entice them on board. They appeared very cheerful, laughing heartily at any thing that struck them as ridiculous.

The annexed wood-cut is from an accurate sketch by Mr. Agate, and exhibits the tattooing above spoken of.

BOWDITCH ISLANDER.

There was a necessity now for beginning the duties of the survey, and guns were to be fired for bases by sound. Attempts were made before the firing, to explain to them what was to be done, in hopes their fears might not be excited, and thus cause their desertion, as at the Duke of York's Island; but the moment the first gun was fired, they hurried off for a short distance to hold a parley. The second gun caused them to start at full speed for the land, and they did not slacken their efforts until they reached it.

Three boats, with several of the officers, landed on the southwest point of the island, whither four or five canoes accompanied them, the confidence of the natives being restored. When they came near the reef, the surf was found to be breaking heavily on it, which caused them to hesitate in attempting to land at that place; but, after looking for some distance, and finding no better place, they determined to try it. The natives, in the mean time, had been passing through the surf, by placing their canoes on the heaviest roller, and, paddling with great energy, reached the beach upon it, without difficulty.

Following their example, our boats landed with the same ease and safety.

The islet on which they now were was covered with cocoa-nut trees, but there were no houses upon it. They called it Fakaafo, which was the same as the natives of Oatafu had designated as the

island where their great chief lived. Oatafu was well known here, as well as the Duke of Clarence's Island, which they called Nukunono. It was observed that they spoke of their own island as the Fanua Loa, or the Great Land; and it, with the two islands just referred to, were all the lands of which they had any knowledge.

The only person our officers saw who appeared to have any authority, was an old man, whom they called Taufaiga, and designated as a priest, and who was considered fakatapa (sacred). The name they gave to the god of the island was Tui-Tokelau, whose residence was pointed out as being in the skies. Mr. Hale, by his questions, elicited that they called their great deity by the same name, with the customary addition of Tagaloa ilaya-i-te-layi—Tagaloa above in the heavens. They ascribed our origin to the same place, and could not be convinced that we were not deities, but only men (tagata lava).

Near the south end of the island was a small lagoon of salt water.

Towards sunset, the natives gave them notice that it was time for them to return to their town, upon which our party embarked and joined the ship.

During the night, they had heavy rains, and stood on and off the island. In the morning, Captain Hudson landed, opposite the islet on which the town was situated, with four boats. The surf was breaking heavily, and they were well drenched, being obliged to wade over the reef, which was from knee to waist deep.

The king and about two hundred natives awaited their approach. The former was seated in advance, with about twenty old men; the rest stood behind, and all began to gesticulate and chaunt, as if under great excitement. They pointed to the sun and howled, spreading mats, and making motions for our party to be seated. Our gentlemen complied with their request, and the king, after embracing Captain Hudson, rubbed noses, pointed to the sun, howled, moaned, rubbed his nose over the captain's chin, hugged him again and again, put a mat around his waist, securing it with a cord of human hair, repeating the rubbing of noses, and howled for twenty minutes. The same ceremony was gone through with by minor chiefs, with the other officers.

The king, whose name was Taupe, was somewhat advanced in years, with a grave countenance. He had a sickly look, and his legs were much affected with the elephantiasis. Notwithstanding this, however, he would have been deemed a fine-looking man. He was thought to be under much greater agitation from fear than any of his subjects. The moment Captain Hudson attempted to leave his side, he would set up a most piteous howl and point to the men. He continued

to repeat, in a tremulous and agitated tone, "Nopo kilalo, mataku au" (sit down, I am afraid). A continued desire was manifested that our people should depart, and take the presents they had offered.

Every endeavour was made to quiet their fears, and to convince them that our people did not come from the sun; but nearly an hour elapsed before they were tranquillized. After this, they became more familiar; but their manners continued to evince the same mixture of timidity and friendliness that had been observed at Oatafu. They were induced to trade after they were quieted, when fish-hooks and knives were in great request, for which mats, fishing implements, model canoes two or three feet long, wooden boxes with covers, cut out of the solid wood, and cocoa-nuts, were given.

When the king had been presented with a variety of articles, he gave in return a mat and maro, after which he made a move towards his town, a few hundred yards distant, whither the whole party followed him. It was with difficulty that he could walk, in doing which he required the aid of an assistant. He at first objected to their accompanying him, saying it was "e sa" (sacred). The whole islet was covered with a grove of cocoa-nut trees, under whose shade about sixty houses were scattered, only a few yards from each other, and resembling those described at Oatafu, though better built and larger.

The most remarkable building was that which they said was their "tui-tokelau" (house of their god). This stood in the centre, and was of an oblong shape, fifty by thirty-five feet, and about twenty feet in height. The roof was supported in the centre by three posts, two feet in diameter, while under the place on which the rafters rested, were many short and small posts: all were very roughly hewn, and placed only a few feet asunder. The roof was concave, and extended beyond the posts at the eaves; the thatching was tied together, which, hanging down, resembled at a distance the curtain of a tent or marquee. All the sides were open, excepting a small railing, about fifteen inches high, around the foundation, which allowed the free passage of the air through. It was one of the most beautiful and pleasant spots, and is well represented in the opposite plate, from a drawing by Mr. Agate. They were at first unwilling that the officers should enter; but upon the explanation, that what was taboo for them, would not be so for the Papalangis, they were admitted by an old priest, but not without reluctance.

The edifice contained but little furniture. Around the eaves a row of mother-of-pearl shells was suspended, giving the appearance of a scolloped curtain. The whole was covered with mats. In the centre, around the largest pillar, a great number of enormous benches, or

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tables, were piled, which were carved out of the solid wood, and being of rude workmanship, were clumsy and ill-shaped. In all probability these were the reclining stools before spoken of. The natives termed them "the seats of their god." Their gods, or idols,—tui-tokelau,—were placed on the outside, near by. The largest of these was fourteen feet high and eighteen inches in diameter. This was covered or enveloped in mats, and over all a narrow one was passed, shawl-fashion, and tied in a knot in front, with the ends hanging down. The smaller idol was of stone, and four feet high, but only partially covered with mats. About ten feet in front of the idols was one of the hewn tables, which was hollowed out: it was four feet long by three broad, and the same in height. Near these was seen the barrel of a small windlass, which the natives said had belonged to a small vessel formerly wrecked on the island, and that only two of the men had been saved, who had since died. This was not the only relic of the disaster, for some of the beams were also seen. Mr. Hale made many inquiries relative to this matter, and they gave him the names of the men who were saved. He surmises, from their having Polynesian terminations, that it might have been a vessel with Sandwich Islanders on board, and he is somewhat strengthened in this opinion by finding the word "debolo" in use among them. The word had puzzled him at first, for the Sandwich Islanders had adopted it to express "the devil." There it was used as "o debolo," and signified an ancient god, Atua tafito.

In the malæ, around the largest pillar, were many spears and clubs, all much battered and worn, which had likewise been picked up from the sea, and resembled those of Feejee and Samoa. These were called "la-kau-tau" (wood of war); but they had no specific name for the different kinds. These were the only warlike weapons seen among them. A number of war-conchs were on the tables.

The well which supplied water was a short distance from the malæ. It was walled up, was about fifteen feet deep, and surrounded on the top by a high fence. The water was about two feet deep, and great care was taken to preserve it clean and pure.

The part of the town facing the sea was built up with a very good stone wall; along this were several small houses, while on the shore of the lagoon was a row of canoe-houses, some fifty in number. The canoes were some distance off in the lagoon, filled with the women and children.

Although they showed a decided disapprobation of the presence of our officers, yet they made no opposition to their examining the village. In some of the houses were found children and a few women; the old queen was discovered, hid under a mat, who, when found, was in great

terror. In contrast with the old queen, the younger females appeared very good-looking and well shaped.

The natives all showed a constant anxiety for the departure of our people, frequently repeating expressions which were interpreted that they were tired of their company; but all this time they carried on an active trade, and exhibited their thieving disposition very strongly. The officers lost many small articles, which were pilfered very dexterously; and if any things were dropped or suffered to be out of sight a moment, they were instantly concealed or made away with. Mr. Rich, when near the boat, gave his botanical collecting-case to a native to hold, who, the moment his back was turned, ran off with it; and it required a hard chase to overtake him.

In one part of the village, two drums were seen: one of these was a trough resembling those at the Feejee and Tonga Islands; the other was a cylindrical frame, set upright in the ground, with a piece of shark's skin drawn tightly over it, like those of Hawaii: the latter was beaten like our drums, with two sticks, and was intended as an accompaniment to dancing; for when it was beaten, the natives began that exercise. The motions of the dance were similar to those observed in other parts of Polynesia, only more varied.

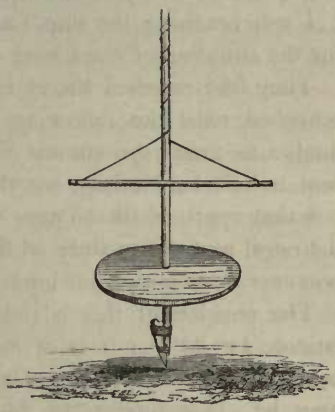
The younger portion of the community, of both sexes, were naked; while those more advanced in life wore the maro, which in the men was from six to eighteen inches wide. Some of these were very fine in texture, and bordered with fringe. The maro worn by the elder and it was presumed married women, consisted of a great number of leaves tied to a cord, and then slit into fine threads. These were kept well oiled and perfectly pliable, and formed a huge apron, resembling a bundle of straw tied around the loins: it was almost impossible to conceive a more unwieldy or ridiculous dress; its weight was about fifty pounds, which may give some idea of its size; if it were rolled up, it would never have been recognised as a part of female attire.

Their ornaments consisted of necklaces of shells and bone, ear-rings of the same, and false curls in front. It was observed, that their hair appeared to be thinner than that of the other islanders, though their heads did not approach to baldness.

In manufactures they seemed quite apt. They had two kinds of mats, the one about four feet square for sleeping, the other for clothing: they evinced some ingenuity in these, as well as in their fish-hooks, which were made of bone, shark's teeth, and shell; many of these were small and remarkably neat. They also had saws and files, formed of shark's skin stretched on sticks, which in their hands were quite

effective in wearing away the soft wood, &c. The construction of their drill was ingenious: it was pointed with a hard stone, and the mode of using it and producing the circular motion can be more readily comprehended by reference to the wood-cut.

The motion is communicated by a vertical movement of the hand, and when practised by a native, is exceedingly rapid. Their boxes or buckets are of various sizes, from the capacity of a gill to that of a gallon; they are cut out of the solid wood, and the top or lid is fitted in a neat manner. These are used to keep their fish-hooks and other small articles in, to preserve them from the wet. Like the natives of Oatafu, they do not appear to cultivate any thing, but derive their food from the cocoa-nut and pandanus, which are the only edible vegetable articles that grow on the island; but the far greater portion of their food is drawn from the sea. That they have sufficient nutriment, is amply proved by their robust and healthy looks.



DRILL.

The population of this island is supposed to be about six hundred souls, most of whom dwell in the town. Those that were seen on Oatafu are supposed to belong to this island also; and it will be remembered that their canoes were there double ones, while all those seen at Bowditch Island were single. Throughout all Polynesia the double canoe is used in navigating from island to island. This will reconcile the fact that Oatafu, or Duke of York Island, when first visited, was found uninhabited, as is particularly mentioned by its discoverer.

After a stay of three hours at their town, Captain Hudson yielded to the pressing desire of the natives to get rid of him, and ordered all the officers and men to the boats. The natives showed their delight at this move, and were very assiduous in assisting their visiters to embark. The confusion of embarkation was taken advantage of by them, and numerous small articles were stolen, which were not missed till afterwards. Many of these thefts were committed in the most barefaced manner, and it is believed that they would have gone to much greater lengths, if they had not been restrained by their fears.

Along the coral reef were walls of coral, in the form of piers, eight or ten feet high, and from twenty-five to thirty feet long.

There was no sign of places for cooking, nor any appearance of fire, and it is believed that all their provisions are eaten raw. What strengthened this opinion, was the alarm the natives felt when they saw the sparks emanating from the flint and steel, and the emission of smoke from the mouths of those who were smoking cigars.

Dip and intensity observations were made here.

Upon reaching the ship, Captain Hudson determined to bear away for the situation of the island of the Gente Hermosas of Quiros.

They had reached the vicinity on the 31st of January, where they searched until the following day, when they made land, but were unable to finish the survey of the island for four days. Boats were sent to effect a landing, but the surf was found to be too heavy, and one that approached too near was caught in the rollers and thrown on the coral reef, fortunately without harm to any of the crew; the boat, however, was somewhat injured.

The position of this island is in longitude 170° 55′ 15″ W., and latitude 11° 05′ S.; it is of coral formation, but has no lagoon; it is nearly round, and four miles and three-tenths in circumference; it may be classed with the high coral islands, and is elevated from fifteen to twenty-five feet above the level of the sea; it is well wooded with cocoa-nuts, pandanus, and other trees and shrubs. The sea breaks constantly on all parts, and no safe landing exists. Its situation differs from the position laid down for that of Quiros. Captain Hudson therefore called it Swain's Island, after the master of a whaler, who had informed him of its existence. When within a mile of the island, no bottom could be had with two hundred fathoms of line. This isolated spot gave no other evidence of its ever having been inhabited, except the groves of cocoa-nut trees. Pigeons, similar to those seen at the Samoan Group, were observed.

After securing observations for its position, the vessels bore away for Upolu, with the westerly breeze, which had continued for the last eight days, and been almost constant. This will serve to show that there is no real difficulty in the population of Polynesia migrating from west to east during this season of the year, when the trade-winds are almost entirely interrupted.

Until the 4th of February they had bad weather, and heavy squalls accompanied with thunder and lightning.

On the 5th of February, the mountains of Savaii were dimly visible, although they were between fifty and sixty miles off. On the 6th, they were off the island of Upolu, when Captain Hudson, to lose no time, despatched the tender, with two boats, to survey the south side of the island, while the launch, with the first cutter, was

to be sent round its east end, in order to complete the work in the least possible time. In the afternoon, the Peacock anchored in Apia Harbour.

Many minor things at Apia had changed, after an absence of fifteen months. Much of this was to be imputed to the different season of the year, it being now the rainy season; and from this cause, the luxuriance of growth had enveloped every thing in a sprightly green, that embosomed the village and white walls of the new church, of which the foundation was just laid at our former visit.

The day of their arrival was the Samoan Sabbath, and all was quiet and peaceful. Some of the officers landed in the afternoon, and were greeted by many of their old friends.

The improvements, beside the church, were a store and dwelling-house, built by Mr. Cunningham, Her Britannic Majesty's Vice-Consul, who is likewise about erecting a saw-mill. The church is a very creditable building, and quite neat in its appearance, with walls of stone, and roofed after the native fashion. Near by are deposited the bones of the lamented missionary, Mr. Williams, and of Mr. Harris, which were brought here from Erromango by H. B. M. sloop Favourite, Captain Croker, who himself has since fallen in his endeavours to forward the missionary cause.

The missionary brig Camden, which had just returned from a cruise to Raratonga Island, was at anchor in the harbour.

As this was the season of bad weather, Captain Hudson made every arrangement to meet it; for the harbour of Apia is somewhat exposed to both the sea and the north wind, from which quarter it is said to blow most violently.

On the 12th of December preceding, they had experienced there a violent hurricane, which had blown down many trees, and done a great deal of damage to the fruit.

We are indebted to Mr. Cunningham for some observations on this storm, which are as follows.

On the 12th of December, 1840, they had light winds from the southeast, the upper strata of clouds flying from southwest. The wind continued to increase until the 16th, when heavy squalls were experienced from the northeast. At 2 A. M. the wind was very heavy from the southeast, accompanied with rain, and some houses were blown down; at half-past two, the gusts were very heavy from the south-southeast. The barometer, although an injured one, fell as low as 24 in., its ordinary standing being 28 in.; the temperature was 88°. At 6 A. M., the wind again rose with rapidity, blowing down houses and trees, stripping them of their leaves, which filled the air in all

directions; the blasts were very severe at intervals of ten minutes. At 8 A. M., a sudden shift of wind took place to the southwest; after which it moderated, and at noon the weather became clear, the wind still continuing from the southwest, while the upper stratum of clouds was now seen to pass over from the northeast. The following day the wind was in the same direction, with fine clear weather. Mr. Cunningham observes, that the houses were generally blown down after the change of wind occurred.

The natives relate the occurrence of a similar gale, which did great damage, about nine years before, destroying all the plantations; and, from their account, its changes took place in a similar manner, from the northeast to the southwest.

From the great fall of the barometer, and the fury and sudden change of the gale of the 16th, its centre must have passed over Apia.

Although these severe hurricanes do not happen very frequently at the Samoan Islands, yet, from reports that I received, I am disposed to believe that they occur very frequently between them and the Friendly Islands, where scarcely a season passes without some one of the islands suffering from one of these awful calamities.

It would therefore be advisable for our whale-ships to avoid cruising in the neighbourhood of these groups, during the season of the year that these storms are liable to occur, viz., from the middle of December to the end of March. Some ships have been almost made complete wrecks of, that were so unfortunate as to be overtaken by them.

At the Samoan Islands, curious atmospheric phenomena are not uncommon. I am indebted to the same source for several notices of halos, and of one in particular, which happened at Fasetootai, about twenty miles to the westward of Apia, on the 1st March, 1840. The day was very clear, and, till near noon, no clouds were seen; the sky was azure blue in the zenith, deepening into dark purple, or nearly black, on the horizon. At thirty minutes past noon, there was a white ring around the sun, of dazzling brightness, of five degrees width; beyond it, a ring of white hazy appearance, of the radius of fifteen degrees, a deep-blue colour still continuing between the sun and halo. At 1 P. M., prismatic colours spread over the whole, and were very bright. At two o'clock, they had heavy squalls at Fasetootai, with the wind at east-northeast. This phenomenon appears to have been local, for it was not observed at Apia, only twenty miles distant. The wind, however, during its continuance, was found to have changed to northwest-by-north, attended with heavy rain, and bad weather continued for a fortnight. Both Mr. Cunningham and

Mr. Williams assured me that the halos and parhelia were usually followed by bad weather.

At Apia, among their old acquaintances, they encountered Pea, the ruling chief of the place, whose begging propensities still existed in all their force. His form was equally rotund, and his desire of being of service quite as great. Report spoke of him as having become very religious of late, but his covetousness had not diminished in consequence, at least in the opinion of our officers. He was generally full of business, among his friends and relatives, all of whom he considers more or less as his dependants. He was very anxious to be informed what had become of his relative, Tuvai, the murderer, whom we had carried away from these islands on our former visit.

The missionaries were as attentive as formerly to the officers, and gave them every facility that lay in their power of spending their time usefully. They have been making progress in their efforts to civilize these natives, by establishing schools, and stimulating them to improve their condition. Almost every village now has its substantial white-washed church, which also serves for a school-house; and, from the reports, both continue to be well attended. Some improvements were seen to have taken place in the dwellings, the arrangement of the interior having a more civilized look, not only from the numerous articles of European manufacture, but in an improved state of ventilation. The cattle and horses were on the increase, and there are few natives but have supplies of pigs, poultry, and the vegetables of the island.

Purser Speiden, who was the officer charged with procuring supplies, and superintending the trade with the natives, having found much difficulty in obtaining them alongside the ship, received permission to make arrangements for a suitable place on shore. For this purpose he procured a place to erect a pen for the pigs, &c. To show the exorbitant demands of the natives, and their desire to practise imposition, I will state the difficulties he encountered. In the first place, he had to pay for the site on which to build a pen; secondly, for the logs and poles to build it with; thirdly, for going after the timbers; fourthly, for building the pen; fifthly, for transferring the live-stock to it; sixthly, for services to a native to watch the pigs during the day and see that they did not escape; seventhly, to pay a man to collect cocoa-nuts for food; eighthly, to pay a woman to feed them; and ninthly, to pay a man to watch the pigs, taro, &c., during the night. Besides this, there was a charge made for trading under the large tree! This traffic seldom failed to afford much amusement to the lookers-on. In the centre, near the trunk of the

tree, was the trade-box, and near to it stood the trade-master, measuring the fathoms of cloth. On one side were natives, seated with their cocoa-nuts and pigs, and others looking on; some again sitting aloof, because they could not obtain their price, or the article they wanted; and others watching their opportunity to obtain a small reward for some service. The vignette is from a sketch by Mr. Agate, of one of these parties at Apia.

In the account of my visit to this island the year previous, I have mentioned the intention of Mr. Williams to extend the missionary field to the groups west of the Feejees, and had occasion to refer to his melancholy end in carrying out this intention, and the recovery of his bones by H. B. M. sloop of war Favourite.

That occurrence, instead of damping the ardour of the survivors, has been the means of giving it a fresh impetus. Mr. Heath, who has become the successor to Mr. Williams, has made a cruise with a number of native missionaries, and succeeded in placing them in the very island which was the scene of the massacre, with every prospect of success.

The Camden was fitting out for another cruise, under the Rev. Mr. Murray, of Tutuila. Captain Hudson pressed upon them the expediency of a visit to the island that he had just discovered, Fakaafo or Bowditch; and it is to be hoped that ere long their enterprise may

lead them among this as yet uncontaminated people, who will then receive, coeval with their discovery, and prior to any contaminating influence, the truths of the gospel.

The plan adopted, of using native pioneers, seems to be one well calculated to succeed; and I am satisfied, from the view I have had of missionary operations, that it is the only one likely to give a foundation on which to raise any permanent superstructure.

The white missionaries have a vast many difficulties to contend with, and are very likely to be deceived in some respects, in consequence of their general want of knowledge of the world. These difficulties are principally the hypocrisy and deceit of the natives, who are adepts in the art, giving a false impression relative to their feelings and designs, particularly when they think their personal interest may be promoted by their dissimulation. This trait of character is not confined to individuals, but frequently extends to whole districts.

Influential natives, brought up as teachers, are well calculated for the duties of missionaries, and take pride in the performance of them, and being fully aware of the native character, understand well where to place their confidence. I have had occasion to speak of the enthusiastic manner in which they enter upon their duties.

I would not be understood as throwing any doubt over the expediency of the missionary operations in these islands, but my intention is to express my preference of the mode they are now adopting to spread the gospel into the other islands, a mode which I am well satisfied will be of infinite advantage in facilitating the desired effect, and at a much less cost, both of time and money.

No political change had taken place in the government. Malietoa and the Manono party still have the power in their hands, but reports were rife that the chief had been a backslider from his professions of Christianity, by attending some of the feasts of the devil's party. The consequence, as at his time of life may be readily imagined, was a fit of sickness, which has been considered as a judgment upon him, and caused his return with much contrition to his religious duties and observances. It is said, that during his illness there was much excitement among the high chiefs, in relation to the succession to his title, that of "Tupu," or sovereign; and some fears were entertained that an outbreak might occur, that would place the power in the hands of some of the restless spirits that are known to be averse to the missionaries. If, however, they have established themselves as firmly as appearances warrant one in believing, there cannot be much danger that their exertions will be retarded, much less put a stop to.

Among the visiters to the ships, was Mole, the second son of Malietoa,

of whom we had formed a good opinion during our former visit, and who, it was then generally supposed, would succeed his father in authority. He is warmly attached to the missionary cause, and affords important aid in carrying out their plans, having much influence with his father, and restraining his evil propensities. He has the reputation of being very popular with the common people in the town of Sagana, where he resides and is a teacher. From him our gentlemen obtained the news of our friends among the nobility. Emma, his sister, whom we had all admired so much, and whose portrait is given in the second volume of this Narrative, was married to Samuel, the tall and handsome chief of Faleatii. The haughty Vavasa was in Manono, which was the case also with Malietoa. Tooa was absent, and many other chiefs who have attended the fono, were at their districts. Opotuno was still in Savaii, on the alert to prevent surprise, and it was reported that he had made some advances to join the missionaries with his people; but little credit was given to this story. They also learned that at the time Captain Hudson was in search of him he was concealed, with a few of his followers, at a short distance.

For the first eight days after the Peacock's arrival, they had almost continual rain, with the wind varying from the north to west, and with a disagreeable swell setting into the harbour.

Tents were erected on shore to afford an opportunity for the necessary repairs to be made to the boats, and others for the use of the magnetic instruments.

On the 10th, they experienced a strong gale from the northwestward, with a heavy sea and torrents of rain. One of their anchors started, but they soon brought up with their sheet-anchor, although a ship would usually ride with very little strain upon her cables, owing to the strength of the tide, which causes her to lie nearly in the trough of the sea, and to roll very heavily. The stream of fresh water which empties into the harbour, has some tendency, when it is much swollen, to maintain a ship in this disagreeable position, by the force of its current. The harbour, through its discharges, is at times strewed with quantities of drift-wood.

The rain continued without intermission for nearly the whole time of their stay, so that no opportunity could be had of airing or drying the sails. So long a duration of wet, together with the heat, caused some fears relative to the health of the crew, and particularly those who were away in the boats, from their being more exposed to the weather. Every precaution was taken to prevent sickness.

A few days after they had been at anchor, Captain Hudson received a letter from Lieutenant Perry, who was of the surveying party, stating

that the chiefs of Sanapu had enticed away and secreted two of the men, intending them for pilots of that harbour after the Peacock should depart, and had promised to protect them. A messenger was at once despatched across the island by Pea, the chief of Apia, demanding the two deserters from the Sanapu chiefs; at the same time assuring them that if the men were not immediately delivered up, the Peacock would be removed to their harbour, and their town destroyed. This had the desired effect, and the deserters were brought back to the ship by the chiefs of Sanapu.

Captain Hudson, after rebuking the chiefs for the part they had taken in the transaction, and giving them some advice in regard to their future intercourse with the whites, paid them the reward Lieutenant Perry had offered for the apprehension of the deserters.

On the 21st, Captain Hudson hearing that the noted Sangapolutale, principal chief of the towns of Saluafata, Fusi, and Salelese, who had protected and refused to give up the murderer of Gideon Smith, Tagi, before mentioned, was at one of the towns near by on a visit, determined, if possible, to surprise and take him prisoner, to be held until such time as the murderer were given up. For this purpose he visited the town before daylight of the 22d, with a few officers and men, but without success.

Previous to this time, Captain Hudson had had intercourse with this chief through our consul, Mr. Williams; and had demanded of him the punishment or delivery of the murderer, Tagi. In the course of the communications, Sangapolutale acknowledged that the murderer ought to be punished or given up; said he once wanted to kill him himself; but being a petty chief, he was backed and protected by the chiefs and the people of the three towns before named, who were promised, in case of necessity, assistance from some of the neighbouring chiefs, as well as others on the opposite side of the island. He further said, that he was desirous of giving him up, a few months before, to the commander of the Porpoise. It was distinctly stated to Sangapolutale, that the murderer must be either punished or given up, in conformity to the regulations adopted in their fono, composed of all the principal chiefs in the island, and that if neither of these stipulations were complied with, Captain Hudson would be compelled to employ the force under him in burning the towns that concealed and protected the murderer, and set their own laws and us at defiance.

Three days were given him from the time of the interview, to comply with the demand. He promised to do what he could, but he was fearful of the result, as his people wanted to fight, and had been promised aid from many quarters.

On the third day, his messengers arrived at Apia, and brought word that the chiefs and people were determined that the murderer should not be given up or punished; that they defied the Papalangis and their power; and that, if Captain Hudson chose to come and take him, they would give him a fight. The messenger further stated, that they well knew he would be demanded according to their own regulations, but they would take care he should not be punished or given up, for they were prepared to resist any attempt that would be made. Many other insulting messages were received; among them, one from the murderer and his friends, that when "he could kill a few more white men, he would be given up."

Such were their threats and boasting: their conduct was conformable to them, as represented by our consul, the missionaries, and Mr. Cunningham, H. B. M. vice-consul. Captain Hudson now saw the necessity of taking some steps that would check this criminal and audacious spirit, and prove to the natives that we had the power to punish these aggressions on our citizens.

The attempt to take the chief was designed to bring them to terms, without any further difficulty; but not being successful, it was necessary to take some effectual measures for their punishment, particularly as the three towns had now united with their chiefs in setting our force at defiance. The missionaries also saw the necessity of doing something to insure the safety of those who may hereafter have communication with the natives, by renewing in their minds the fear of our power.

Notwithstanding the weather was so very unpropitious, the naturalists made excursions to the different parts of the island. They all describe the luxuriance of the vegetation as exceeding any thing they had before witnessed: the rich soil, combined with the heat and copious rains, rendered every spot fertile, and seemed to give new life to the vast variety of parasitic plants with which all the trees were covered, and which, in the groves, were so thick as to form masses impenetrable to the rays of the sun. A remarkable ficus was passed on this trip, of which Mr. Agate made a characteristic drawing, and which will give a good idea of their size and manner of growth: the road or path passes through its trunk. A number of other trees were remarkable: among them the "ife," a gigantic chestnut, with its projecting buttresses around the trunk. The woods were enlivened by many birds, and the air filled with their songs and chirpings.

At Siusinga, a devil's town, Messrs. Rich, Peale, and Agate, saw Seeovedi, better known as Joe Gimblet, the great priest of his creed. He lay on a mat by himself, no one speaking or going near him, and

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FICUS OR BANYAN, TREE.

UPAS.

was pretending to read his sacred book, which our gentlemen discovered was a volume of the Rambler! This was obtained from him, by Mr. Agate, in exchange for *a treatise on rail-roads*, which had a flashy red cover, and therefore calculated to inspire his flock with additional reverence for their priest. He also made use of a kind of gibberish in talking to them, wishing, as was supposed, to give his followers the idea that he could speak the Papalangis' language. How he had contrived to propitiate the anger of the old chief Lelomiava, was not ascertained; but a story was told of him, that about a year before he had lost his two wives, and disappeared, informing his followers he was going to heaven to procure a third. He absented himself about a week, no one being informed where he had gone. On his return without a wife, he was asked where she was. His reply was, that the Great Spirit had told him that he was too old to marry a young wife, and must return to his people, who would take care of him, provide him with food, and do for him all that a wife could do. He accordingly returned, in obedience to the Spirit's directions, and appears to live contented, all his wants being supplied without any care or trouble to himself. One of the most ridiculous parts of this fellow's proceedings, was a native bringing to him an old tea-kettle, which was tabooed and held sacred, on which he began beating with an iron knife, making much noise, his face assuming a contemplative expression, until he had done with his mummeries. Strange as it may seem, he has many proselytes, and nearly all the inhabitants of the district of Sagana are followers of his doctrine. Their appearance contrasts very strongly with that of the Christian villages, while the heathens are, to appearance, almost a different race of people; the one with long hair, gathered in a knot on the top of the head, and only clothed in the maro; the other with short hair, and dressed in a clean shirt and pareu. To strangers, both are generally kind and hospitable, and continue the Samoan custom of offering food to travellers as they pass through the village.

Since our visit in 1839, Mr. Day had taken up his residence within two miles of Malietoa's town, where Mr. Hale and Dr. Whittle spent an hour or two with him, and proceeded thence to visit Malietoa. Near the new church, the house of Mole was pointed out, in which he had adopted many of the conveniences introduced by foreigners: the floor of his house was of boards, raised above the ground, and his doors were made to turn on hinges. The interior was divided by partitions into four rooms. A table and some rude seats composed the furniture. How far this example will be followed by the natives, time alone can determine. I believe that all those who have examined and reflected upon the condition of the natives of the South Sea islands, will be satis-

fied that it will be a very desirable improvement, both for their comfort and health, if they can be induced to abandon their modes of sleeping on the damp ground; and some endeavours have already been made to effect a change in this respect, as one of the best means to prevent the diseases of the climate, which are thought to arise principally from this cause.

These gentlemen also visited Malietoa, who was still occupying the same small house, directly opposite to the fale-tele, in which I saw him during my visit. On entering, they were greeted by his two wives, the matronly Lauilupa, and Siona, the younger, both of whom still maintained their fleshy appearance. They recognised Mr. Hale, and gave him a warm greeting. The old king, who had been sleeping on his divan or raised floor, now came forward. He appeared greatly changed, and was scarcely to be recognised as the same person. Instead of his dignified and upright carriage, which struck us all so much at our former visit, his form had become meagre and shrunken, and he was apparently bowed down with years, and trembling with infirmities.

He saluted our gentlemen with his usual courtesy, and, after seating himself, listened to the account of their visit, and of the news at Apia. He still retained much of his former air of command and sternness, which caused him to be likened by Dr. Whittle to a sick lion. He was unable to sit up long, and was soon again asleep. Old Lauilupa now entertained them by complaining of her sufferings from rheumatism, which Dr. Whittle gave her directions how to treat.

The two wives began, in a short time, to beg for presents—the elder one for needles and thread, the younger for jews-harps, rings, and looking-glasses. These were promised, on their sending to the ship for them. They supplied their guests with food, which was served on an eating-mat, and consisted of pork, fish, taro, and yams. The queens sat by, pointing out the choicest bits, and, had not our gentlemen declined the honour, seemed disposed to use their royal fingers for its conveyance to their mouths.

In the evening, they took a stroll around the village, where every house was found lighted up with a cocoanut-oil lamp, or a torch of the candle-nut, strung upon a stick, and some with the fire of dry cocoanut leaves. In each house a family circle was usually seen, variously employed, some eating, some talking, others braiding sennit, but no amusements; for it was Saturday evening, and they were preparing for the Sabbath. Wherever they went, they were received with civility, and invited to eat.

Returning to Malietoa, another meal was found provided for them,

after which they were taken to a neighbouring house, which had been prepared as their sleeping apartment.

In the morning, they were awakened early by a little boy, who brought them water for washing, which showed an attention to their comforts scarcely to have been expected among those who are considered as only half civilized.

When they rose in the morning, although but a little after sunrise, they found the natives already collected, at morning prayers, in the church, under the ministration of Mole; and, after the service was finished, they were invited to breakfast with him.

The return for Malietoa's hospitality was now to be made, prior to their departure; and all they had, consisted of but a few small articles; but these were joyfully received, with many thanks; and our gentlemen took their leave, and returned to the ship.

Subsequently to this, Mr. Hale made a visit to the village of Matafayatele, where he was fortunate in being a witness to a little festival, called "faausi." A procession of about twenty men issued from a grove, bearing on their shoulders large wooden trays, shaped like shallow troughs. They were all dressed in gala-dresses, having wreaths of leaves and flowers about the neck and breast, with plumes of sugar-cane blossoms in their hair. They marched forward in quick time, to a lively song, which they sang in unison, until they reached the faletele, where a crowd appeared to be expecting them. In the house there were thirty or forty elderly men, seated around the sides, while in the centre a number of youths were busy in serving to each a mess of food from the trays. The chief who was the head of the feast, was recognised by Mr. Hale as having been named Tongipavo on our former visit, which name, he was informed, had been exchanged for that of Benjamin, since his conversion to Christianity. He gave Mr. Hale a seat near him, and ordered a mess of food to be served. It proved to be mashed taro, mixed with grated cocoa-nut and soaked in cocoa-nut-oil. The whole had been wrapped in banana-leaves and cooked. Mr. Hale found it quite palatable, and somewhat like cold mush fried in butter. After those present had satisfied their hunger, each wrapped up a portion of it in banana-leaves, to carry to his family. The whole was a pleasing sight, exhibiting one of the social customs of their primitive mode of life.

The surveying boats having returned, and the ship having replenished her stores of wood and water, and finished the repairs, Captain Hudson prepared for his departure, having determined to proceed to Saluafata Harbour.

As their time of departure had become known, and it drew near,

their friends and acquaintances of rank did not omit to pay them frequent visits. Among these was old Pea of Apia, Mole, and others. These calls ought to have been termed begging visits, as they seldom saw a thing that pleased them that they did not ask for. Mole brought a complaint to Captain Hudson, of an outrage by a white vagabond on shore; but it was shrewdly suspected that, notwithstanding his being a missionary teacher, his design was to get more presents from his parting friends.

On the 23d, Captain Hudson was visited by Matetau, the celebrated war-chief of Manono. In coming to the ship, he and his numerous retinue were overtaken by a violent shower of rain, which completely wet them. As the old chief was somewhat chilled and cold, Captain Hudson supplied him with a clean and dry shirt. He professed himself delighted; all was "very good," captain, officers, and ship. His visit, like that of all the other chiefs, was evidently to receive his quantum of presents, and hence his desire to make himself as agreeable as possible. His features were more strongly marked than those of the islanders usually are; he is above the middle size, has an aquiline nose, and a high and retreating forehead, with the frontal portion narrow, but widening behind the ears, having, as some thought, a strong resemblance to the chiefs of New Zealand. Mr. Agate succeeded in getting a good sketch of him.

MATETAU.

He adopted the usual Samoan custom of pleasing by flattery, grimaces, and gesticulations, enacting, as was thought, a fight. He had picked up a few words of English, which he did not fail to make use of to attract attention. Owing to the necessity of getting under way,

his visit terminated at an early hour. He left the ship apparently very much gratified with his visit, or, in other words, with the presents he had received.

On the 22d, they took leave of their kind friends, the missionaries and residents, with many wishes that they might be successful in their operations. The winds were light, and two days were spent before they reached the harbour of Saluafata, where they anchored on the evening of the 24th.

At daylight, orders were sent to Acting-Master Knox, in charge of the tender, to anchor, with the assistance of the boats, abreast of the town of Saluafata, to cover the landing party, and clear the town. At the same time, special orders were given by Captain Hudson to the first lieutenant (Mr. Walker) of the Peacock, placing under his direction the boats of that ship. These will be found in Appendix I.

On an examination of the passage through the reef, Mr. Knox reported, contrary to the account given by Lieutenant Emmons when he surveyed the harbour, that there was not water enough for the tender. Fearing some difficulty, Captain Hudson had anchored the Peacock as near the reef as possible, and not wishing to risk the tender in any way, countermanded part of his orders, and determined to clear the town with the Peacock's guns, being aware that none but the fighting men remained, and that all their valuables and movable property had been removed.

Preparations were therefore made for swinging the broadside to the town, and the necessary arrangements for landing completed. Captain Hudson, however, still thought it proper to wait a few hours, in the hope of receiving some communication from the natives, and that they would at the last moment, agree to give up or punish the murderer. But no overtures whatever being made, at nine o'clock the boats were manned, and lay on their oars, ready for the signal to proceed. A fire was now opened from the ship, the balls being elevated so as to pass over the town; after which the boats pushed for the shore, the party landed, and the town of Saluafata, which consisted of about seventy-five houses, was reduced to ashes. The towns of Fusi and Salelese, of some fifty more, shared the same fate. The party then returned to the ship, without any accident to themselves or the natives, having met with no opposition whatever, notwithstanding the great boastings and bravado messages which had been sent by the chiefs and inhabitants.

This act was performed with great reluctance, and not until the most perfect conviction of its being absolutely necessary to secure the safety of the crews of such of our whaling fleet as touch at this island,

as well as to restore the respect due to our flag and those who sail under it, and to correct the erroneous opinion, that our forbearance was the result of fear of their prowess and numbers. In their transactions, and outrages committed on strangers, they had exhibited a fearlessness and spirit of daring that it was time to put a stop to. By this attack upon them, they became fully sensible that they were not our equals in war, nor capable of resisting attacks that might be made on them; they have in consequence become much more humble, so that the general opinion throughout the islands is, that hereafter they must conform to the regulations they made on our former visit, and maintain them with strict integrity towards foreigners.

Since this transaction, I have received letters from the island of Upolu, which inform me that this well-deserved punishment has had a most happy effect, and has put a termination to evils that had formerly been of common occurrence.

Communication was had with Apia the day after, the natives of which town rather exulted in the punishment that had taken place.

In leaving the harbour of Saluafata, the Peacock had a narrow escape from wreck; for, as they were standing out of the passage, they were overtaken by a heavy squall, with torrents of rain, and it being near the close of the day, pitchy darkness ensued, and breakers were unexpectedly found under their lee. There was no possibility of returning; but by carrying a press of canvass, they succeeded in getting clear, and an offing was attained by ten o'clock, when it fell calm.

During the day they were at anchor in Saluafata Harbour, the thermometer stood on board the ship at 93° in the shade, and at 150° in the sun. It was found oppressively warm, notwithstanding there was a fine breeze blowing.

The chief Opotuno, who had committed so many murders, was still at large, and it was conceived that if he could be taken, it would be an example that would be long remembered. For this purpose, it was believed that by obtaining Pea, the chief of Manono, to whom Opotuno was related, the latter would be given up.

The duty of taking the former was entrusted to Lieutenant Emmons, under whose charge the tender was put, and instructions given him to proceed to Manono, make the chief prisoner without injury to him or the inhabitants of that island; and in case of his capture, to proceed to Savaii, and there offer an asylum to Mr. M'Donald, the missionary resident in Opotuno's district. Lieutenants Walker and De Haven, were employed the same night to capture Malietoa, and the chief George, of Cocoa-nut Point. Captain Hudson's instructions

to this party, as well as those to Lieutenant Emmons, will be found in Appendix II.

Neither of these parties succeeded in their attempts. The reports of the officers are also included in Appendix II.

On the evening of the 5th, they anchored in the roadstead of Mataatu, island of Savaii. They had constant rain and squally weather, with a strong gale of wind from the northwest.

I was somewhat in hopes that this visit would have led to a further knowledge of the interior of Savaii, and of its numerous craters, which would have enabled us to make a comparison with those of Hawaii, for, from appearances, and so far as information could be obtained, the discharges from the terminal crater of Savaii must be similar with those of Mauna Loa. It will be recollected that Dr. Pickering endeavoured, during our first visit to the Samoan Group, to reach what was termed the "run" or burnt district, and which no doubt resembles the flows of lava that have taken place on Hawaii, of which particular descriptions have been given.

The weather was so unfavourable, that Captain Hudson deemed it imprudent to make any delay in so exposed a roadstead, and they accordingly left it, after ascertaining its position, and making a farther survey and examination of it.

The town of Mataatu is beautifully situated on a bay, which is no more than a mere indentation of the coast. It is surrounded by extensive cocoa-nut groves, behind which the houses are built, in number about four hundred. The town contains about two thousand inhabitants, most of whom are still heathens, and their conduct proved it as much as their looks, for they were more rude and ill-looking than any other natives observed in the group, and reminded the officers of the Feejeeans. This place is the residence of Mr. Pratt, a missionary, who has been established here since the visit of the Porpoise.

Captain Hudson considers the bay of Mataatu as much exposed at all seasons; but between the 1st of December and the end of March, when the north and northwest winds and gales prevail, it is quite dangerous, and should not be visited.

The natives of Savaii are well acquainted with Uea or Wallis Island, to the westward. The west point of the bay is called Matauea, "face of Uea," after the name of the island in that direction.

Some of their spears, clubs, &c., were quite different from those used among the other Samoans, and were in all probability derived from the above island. These facts, in connexion with the winds at this season, are satisfactory evidence that there is no difficulty in the

natives migrating to the eastward; indeed, if they are driven off by unforeseen storms, this is the season that these accidents would be most likely to happen, and their migrations to take place. On reference to the currents and winds, as exhibited throughout the progress of the voyage on the Track Map, it will be seen that there is no difficulty in these migrations being made from west to east.

BOWDITCH ISLANDERS.

CHAPTER II.

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CHAPTER II.

ELLICE'S AND KINGSMILL GROUP.

1841.

On the 6th of March, the Peacock and Flying-Fish sailed from the roadstead of Mataatu, for the islands known on the chart of Arrowsmith as Ellice's Group.

On the 7th, they lost sight of the Samoan Isles.

The vessels pursued their course to the westward, with a fresh wind from north-northeast, until the 14th, when they crossed the meridian of 180°, and dropped a day in their reckoning.

The temperature of the air during this part of the passage from the Samoan Isles had increased from 76° to 84°, and that of the water from 78° to 86°.

At noon, on the 14th, they made land, and by 2 P. M., they were close to what proved to be an extensive ring of small islets, situated on a coral reef surrounding a lagoon. These are so far separated as to give the idea of distinct islands, which has probably led to their having the name of "group." These islets are well covered with cocoa-nut and other trees, which give them a sufficient elevation to be seen at ten or twelve miles distance. The reef which links these islets is awash, over which the sea breaks with violence. There are two openings in its west side, and an island off its southwest point, at the distance of a mile, five miles in length by two in width. The island is thirteen miles long, in a north-by-east and south-by-west direction, and seven miles and two-tenths east and west.

When the vessels had approached within a short distance of the largest island, two canoes were seen coming towards the ship, only one of which came near. In it were five men; and from the familiar manner in which they came alongside, it was evident they had had frequent communication with vessels. They refused to come on board,

but exhibited various articles of traffic, consisting of cocoa-nuts, mats, rolls of sennit, maros, large wooden fish-hooks, war-knives and swords fitted with sharks' teeth, and some rough war-clubs. Their canoe was in construction much more rude and rough than any met with of similar size: it was about twenty feet long, dug out of a single log, and the sides had strips lashed on to raise them higher. It had an out-rigger and paddles very similar to those seen at the other islands.

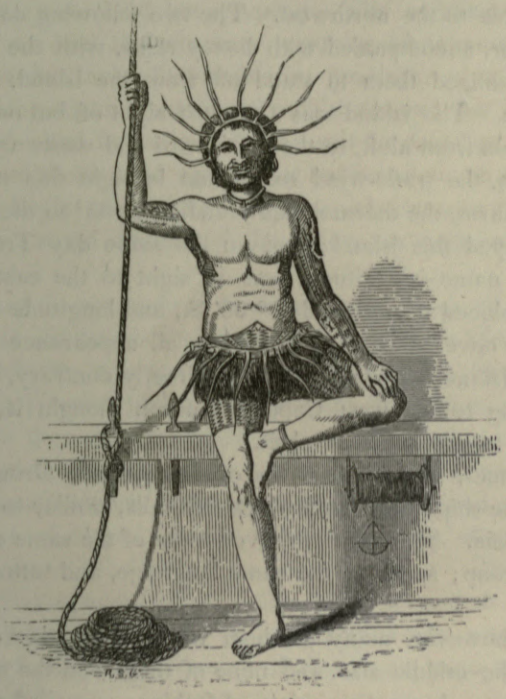
These natives were, in general appearance, inferior to those of the Samoan Islands, of middle size, and with deep brown complexions, like the Hawaiians, whom they were thought also to resemble in features: but they were well provided with beard, in which respect they resemble the Feejees. They wore their hair, which was thick and bushy, long. One of them was observed to have it parted into five or six large clots of hair, hanging loose about his head, and resembling large foxes' tails.

NATIVE OF ELLICE'S ISLAND.

They were tattooed differently from any heretofore seen, their arms being covered, from the shoulder to the wrist, with small curved figures or zigzag lines. They had this tattooing also on the body, extending from the armpits to the waist, and down, until the whole body was encompassed in the same manner. No marks were observed on the face or legs, but on two of them were a few lines across the small of the back. They wore no clothing, but a strip of fine matting, as a maro, and a coarser piece tied about the hips: the first, which was made of the pandanus-leaf, was about eight inches wide, and ten feet long, and was fringed on each side, which increased its width. The coarser girdle was worn, and attached to it were slips of pandanus-

leaf, a foot long, dyed red, by way of ornament, which at a distance had the appearance of ribands.

One of the men was a petty chief, and was held in respect by his companions. There was another, whose costume was very peculiar: around the head and waist he had a strip of pandanus-leaves, which was so arranged as to form a series of points. The attitudes of these natives were equally singular: one of these is represented in the wood-cut.



COSTUME, ELLICE'S GROUP.

They had no other weapons but spears and knives, and seemed to be equipped for a fishing party, from the implements they had with them. Some rolls of sennit were bought, and large wooden shark-hooks. Their spears were only poles of cocoanut-wood, pointed at one end; and their knives made of small shark's teeth, inserted into a stick with gum and fine sennit, and are about a foot long.

It was soon found that they understood the Samoan language, and spoke a purely Polynesian dialect. The Samoan native easily conversed with them. They gave the name of the island as Fanafute. They seemed perfectly familiar with white men, and when the guns were fired for a base by sound, they showed no kind of alarm.

The island was surveyed, and was found to be in latitude 8° 30′ 45″ S., longitude 179° 13′ 30″ E. There appears to be good anchorage within the lagoon; an abundance of wood is to be had, but it is believed there is no adequate supply of fresh water.

From what was ascertained, the population was put down at two hundred and fifty souls.

The vessels left Ellice's Group the same evening, proceeded under easy sail, and at daylight made the Depeyster Islands, distant three and a half miles to the northwest. The two following days, they had squally weather, accompanied with heavy rains, with the wind northward, which obliged them to stand off from the island, as no work could be done. The island was thus lost sight of, but on the 17th it was again made from aloft, to the northward and westward.

On the 18th, the trade-wind set in and brought fine weather; but exceedingly warm, the thermometer standing at 85° in the shade.

They surveyed this island; and on the same day Tracy's Island, whose native name is Oaitupu, was in sight to the eastward. The observations placed it in latitude 7° 28′ S., and longitude 178° 43′ 35″ E. It is well covered with trees, and to all appearance as extensive as Depeyster Island. As the wind was directly contrary, and a strong current flowing to the west, Captain Hudson thought it would be a waste of time to attempt to reach it.

Several canoes, with the natives of Depeyster's Group or Island, came off to the ship: they used triangular sails, similar to those of the rest of Polynesia. The natives proved to be of the same race as those of Ellice's Group; speaking the same language, and tattooed after the same fashion.

In colour, however, many of them were rather darker; but few were above the middle size, and none of them had the manly beauty of the Samoans. A greater variety of fashions prevailed among them, which exhibited itself more particularly in their hair. Some wore it like that of the Feejees, and the locks were frequently of a reddish brown, although the natural colour was black. Their skin was coarse and rough to the touch; in many it was disfigured after a singular fashion, and in some it appeared as if a scurf prevailed, resembling a person whose skin was peeling off from the effects of the sun; in others, the stage of the disease was seen farther advanced, the scurf having disappeared, and left the skin marked with circular and wavy lines, which the natives called "tafa."* About a fifth part of the natives

* A name the Samoans apply to the marks they burn on the skin for mourning. This was imputed to the effects of a disease somewhat allied to the ringworm, by the medical

seen were affected in this manner; and the skin of these was much lighter than in any Polynesian race they had met with. Among the natives were two albinos; the colour of their skin was of a reddish white, the hair of a flaxen white, with light-blue eyes, so weak as to oblige them to use a shade, and to keep their eyes constantly half closed. Their persons seemed also to be quite tender, and they avoided exposure to the sun by an additional mat over the shoulders. They were covered in many places with large brown freckles: their whole appearance was any thing but pleasing. The account they gave of themselves was, that their parents were the same as the rest of the islanders, and that their other children were dark.

The tattooing was in great variety on the body; but in all, the arms were tattooed alike, for there it varied only in quantity. On the body it was frequently extended across the back and to the abdomen; and in many, the bodies and thighs were tattooed down as far as the knee. Many of the natives designated the figures as intended to represent pigeons (lupe).

These islanders wore three kinds of mats, made of the pandanus-leaf: one was similar to that described at Ellice's Group, and worn as a maro; another was worn as a girdle, of thick fringe, from eight inches to a foot broad, tied about the loins so as to cover in part the maro: to this they gave the name of "takai;" the last was used as a wrapper about the body and legs. The fringes of these mats were all dyed of various colours, and the wrapper was tinged on one side in large patterns of divers colours, some in squares, others in diamond forms, which at a little distance had a pretty effect. These mats were worn for different purposes; and the latter seemed to belong to the higher or privileged orders, as the only person who was seen to wear one was the chief. A great many of these mats were brought off for sale, and bought.

On their approach to the ship, every one was seen to have a cocoa-nut leaflet tied around the neck,—a practice which attracted particular notice by their endeavour to keep it constantly in view, from which it was inferred, it might be with them a sign of amity and peace. In all, the lobe of the ear was bored, and distended to the size of an inch in diameter; around this they insert small rings of tortoise-shell, so neatly made that it is difficult to discern the place where they are joined. Many of them had shells and mother-of-pearl ornaments suspended round their necks.

officers, while others thought it might have resulted from exposure to the sun, and moisture of the climate.

Only one woman was seen in the canoes, and every endeavour was made to induce her to come on board, that her likeness might be procured, but without effect; she could not be prevailed upon. She was prepossessing in her appearance, with a pleasing expression of countenance, and had a modest demeanour. She wore a cincture around her waist, and a mat over her bosom. The cincture was made of pandanus-leaves; this was fastened to a cord as a thick fringe, two feet in length, and extended to her knees. Her arms were beautifully tattooed, of the same figure as the men, but the tattooing was continued down the leg in horizontal stripes, an inch and a half wide. This constitutes a great difference from the Polynesians, for with them we have never before met with any females who were tattooed, excepting a few marks on the fingers and feet.

Twenty or thirty of these natives came on board, while the rest remained in the canoes, of which there were about fifteen, having an average of five natives to each. Their desire was to exchange their articles for hatchets and plane irons: iron-articles of all kinds were in great demand, together with beads and rings.

After they had exhausted their desire for trade, some few of them went below, and entertained the officers with a dance and song, both of which resembled those of Polynesia, which have been heretofore described.

In the afternoon the chief paid the ship a visit. He was styled both the god and chief of the island, and was a very fine-looking man, about forty years of age, and grave in his deportment. He reckoned six towns on the island, five of them on the northeast side, and one on the southwest. The population was estimated at one thousand.

The natives said that they had pigs and taro, and brought off some of the latter; but it was small, both in size and quantity. The only articles of food that the natives had with them in their canoes were the young cocoa-nut and the fruit of the pandanus. The former were, for the most part, quite young, and fit only for drinking; but there were some that were old and filled with pulp, to which they gave the name of utanu, and of which they seemed very fond. Besides taro, they said that they had a much larger root, called "pulaka." Yams and bananas they knew by name, but had none of them.

An opening being discovered as the ship passed along the reef, Lieutenant De Haven was sent to examine it, and he found a good ship-channel into the lagoon. The passage was one-third of a mile wide, and the least depth of water in it was five fathoms. It leads to an anchorage in from seventeen to twenty fathoms, on a sandy bottom, where a vessel may lie well protected by the reef. The current was

found to be setting out of this passage at the rate of two and a half miles per hour.

When Lieutenant De Haven returned, he was accompanied by the chief, who called himself both the chief and god of the island, Foilape. He was a fine-looking man, about forty years of age, with prominent features, his hair cut short and nicely oiled. His legs were swollen with the elephantiasis. He was gaily dressed, with both the maro and girdle, beside the square mat of various colours around his waist. He saluted the officers with the rubbing of noses, and said that his name had been Faikatea, which he had changed with Lieutenant De Haven. He remained but a short time on board, and explained by his motions the necessity of his leaving the ship before the sun went down. He was very urgent that some of them should accompany him, and pass the night at his village; but finding nobody disposed to do so, he departed, and the rest soon followed.

This island was called by the natives Nukufetau; they were acquainted with Fanafute, or Ellice's Island, and also with Oaitupu, or Tracy's Island. On being asked if these were all the lands they knew of, they said, pointing to the east, that beyond Oaitupu there were three islands, called Oatafu, Nukunono, and Fakaafo, which it will be recollected are those of the Union Group. Mr. Hale pressed the inquiry, if this were all; and with some hesitation they added the name of Oloosinga, which is one of the small eastern islands of the Samoan Group; but what seemed strange, they did not understand the name of Samoa. On mentioning Tonga and Haabai, the names appeared to be recognised. Some bananas attracting their attention, which they saw hanging up, they called *futi o rotuma!* Mr. Hale, in his inquiries, found the pronunciations of these natives very distinct, and it enabled him better to understand the orthography of their names.

These islanders gave the name of their god as Foilape: on inquiry being made if the Tui-Tokelau also lived there, they immediately replied, that he was the god of Fakaafo, thus exhibiting an intimate acquaintance with the Union Group. It is not a little remarkable that many of the officers were struck with the great likeness that the chief of the island, Faikatea, bore to Taupe, of Fakaafo. At Fakaafo, mention was made of an island called Pokapoka: this name the natives of Nukufetau recognised immediately, and said that it was an island thickly inhabited. We have not been able to ascertain with what island the name can be associated. All these circumstances induced a strong belief that these islanders were derived, at no very remote period, from those of the Union Group; and the fact of the latter being entirely ignorant of other lands, would lead more strongly to that belief.

When Mr. Hale pronounced the name of Tagaloa, the great deity of Polynesia, it appeared to surprise and annoy them. One of them mentioned that Tagaloa was a god taboo to their country, and refused to speak farther about him.

They reported that ten ships had visited their island, and added that a ship of the Wiwi people had spent some days about their island in fishing: that the captain, with five others, had slept on shore. It was conjectured that Wiwi was the appellation by which they distinguish the French people or ships, this term being made use of in New Zealand. The invitations to go on shore were accompanied by such significant signs as to lead to the conclusion that they were not the most virtuous people, and very unlike their ancestors, or race of the Union Group, whose only desire seemed to be to get rid of the parties before night.

The extreme north island was found in latitude 7° 56′ 11″ S., longitude 178° 27′ 32″ E.: it is eight miles long, east-northeast and west-southwest; its greatest width is nearly the same.

The vessels left Nukufetau the same evening, and steered away to the northward. In latitude 6° 10′ S., and longitude 177° 41′ E., they passed a small island which has no lagoon, and does not appear to be named on any of the charts. This they saw at some distance, and although it appears to have been seen before, yet as the charts only designate it as an island, I have bestowed upon it the name of Speiden, after the purser of the Peacock, one of the most valuable officers of the Expedition.

On the 24th, they fell in with another island, in latitude 6° 19′ S., longitude 176° 23′ 15″ E. This discovery I have called Hudson, after Captain Hudson. It was surveyed and found to be but one mile and four-tenths long, north and south, and nine-tenths of a mile wide, east and west. This island is inhabited, a few natives being seen on the beach, and several houses under cocoa-nut trees on its west side. It is of coral formation, has no lagoon, and can be seen about eight or ten miles. There are reefs extending from its north and south points nearly half a mile, on which the surf breaks heavily. They had no communication with its inhabitants.

On the 25th, they passed the small island of St. Augustine, whose position as ascertained was in latitude 5° 35′ S., and longitude 176° 06′ E. It appeared well wooded, but being to windward, it could not be reached without much delay. The wind, thus far, among these islands, had been from the north, and very unfavourable for a vessel cruising among them for their examination; and being light and variable, little progress could be made in any direction.

Until the 3d of April, they continued to sail to the northward, without meeting with any islands. On that day they made Drummond's Island of the charts, one of the Kingsmill Group, where they encountered the regular northeast trades. This island is called Taputeouea by the natives; it is situated in latitude 1° 20′ S., and longitude 174° 57′ E. It is of coral formation, is thirty miles long in a northwest and southeast direction, and varies in width from a half to three quarters of a mile. This, however, only includes the high portions, or that which is above the ocean level a few feet. It is thinly covered with cocoa-nut and pandanus-trees, and not a patch of grass is to be seen, or any sort of shrubbery or undergrowth. To the leeward, or on its west side, the reefs and sand-banks extend off some distance, gradually increasing from the northwest point to the southeast, where they are as much as six and a half miles in width. This reef is interrupted in places, and there is good anchorage off the town of Utiroa, towards the northwest end, near a small sand-bank, which is usually bare. The whole shore of the island as they approached it appeared covered with houses, presenting to the view one continuous village. At intervals of a mile there were buildings of huge proportions, far exceeding in size any they had before met with.

As they approached, canoes were seen coming towards them from all parts of the island. The appearance of these natives was totally different from those already seen to the south. They appeared of the middle size, slender, and well proportioned. Their colour was a shade or two darker than that of the Tahitians, and they exhibited a greater variety of face and features, with black glossy hair, finer than in other races. Their features were small, but high and well marked; their eyes large, black, and bright; their nose straight or slightly aquiline, and always somewhat widened at the base; their mouth large, with full lips and small teeth, which were very imperfect from decay, and they are the only natives in the Pacific with this defect. From the projection of the cheek-bones, the eyes had in some the appearance of being sunken. They wore mustaches, but their beards were scanty. They evidently set a great value on these as ornaments, priding themselves much upon their appearance. The few officers who had whiskers were very much admired, the natives patting their whiskered cheeks with great marks of admiration.

Altogether they were thought to resemble the Malays. Many of them were observed to have the same disease as exists at Ellice's Islands, disfiguring the body and giving it the same scurfy and disgusting appearance.

The majority of these islanders go entirely naked, excepting a covering for the head, consisting usually of the bleached pandanus-leaf. Mr. Agate's sketch of one, represented in the wood-cut, will give an idea of this head-dress.

DRUMMOND'S ISLANDER.

Although it has been said that the majority go naked, it must not be understood that the rest are clothed, for they wear no more than a sort of girdle, which, however, serves no purposes of decency, only covering the abdomen, and lower part of the back. Some few had over their shoulders a strip of matting, with a hole in the centre for the head to pass through, in order to protect their bodies from the sun. A few were tattooed very lightly, and in some it was scarcely distinguishable. Those that were so adorned had it from the breast to the ankles, consisting of short oblique marks, an inch or two in length, drawn parallel a quarter of an inch apart: there was a space both before and behind, of three inches wide, from the neck down, that was uncovered. No tattooing was seen on the face and arms. These natives soon showed that they were familiar and had had frequent intercourse with vessels, for on coming alongside, their first cry was for "rope." They had also a few Polynesian words of the different islands and groups that could be recognised, which they had obtained from the vessels that at various times had visited their island.

Their own language was totally different, and none on board could comprehend it.

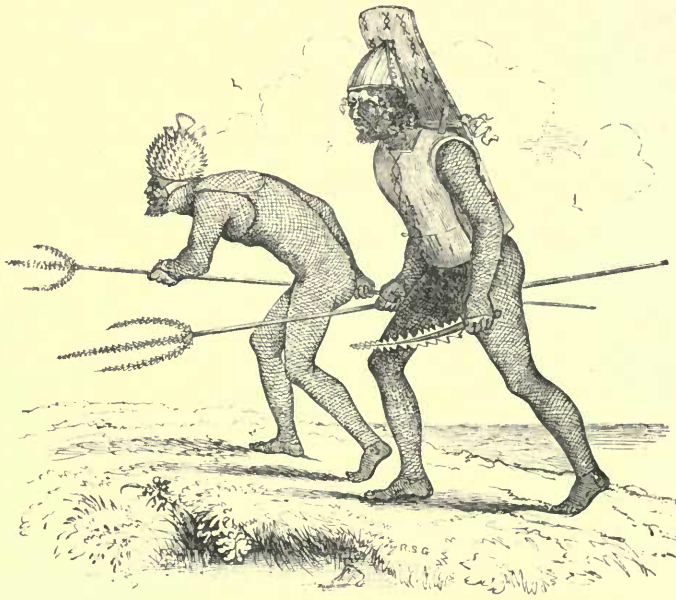
When they arrived alongside, they made much clamour and many gesticulations, but refused to leave their canoes. After some enticing, one was induced to venture on board. They evidently comprehended that the vessel was of a different character from what they had been accustomed to see. The one who gained the deck showed much agitation, but when he saw the arm-chest opened and a musket taken out, his fears were too much for him, and he at once sprang over the stern into the water, and swam to his canoe. Others came on board, but they in their turn, were frightened in like manner, and took to their canoes.

The arms and legs of a large proportion of the natives exhibited numerous scars, many of which were still unhealed. These had been made with shark's-teeth swords, such as were seen at the Depeyster Group, weapons which are calculated rather to make severe gashes than dangerous wounds. The spears are equally formidable, and four rows of shark's teeth are inserted in them; some are of the uncommon length of twenty feet, but they are usually about eight or ten feet long, and have prongs projecting from their sides also armed with teeth. A drawing of these arms is given in the wood-cut at the end of the chapter.

They were evidently in the habit of having severe conflicts with one another, and war seems to be one of the principal employments of this people.

In order to guard against the destructive effect of these arms, they had invented a kind of armour, which was almost an effectual defence against their weapons, and accounted at once for their arms and legs being the only parts where scars were seen. This consisted of a sort of cuirass, covering the body as far down as the hips, and rising above the back of the head three or four inches. This, when taken off and set upon the deck, somewhat resembled a high-backed chair. It was made of plaited cocoanut-husk fibres, woven into as solid and compact a mass as if it had been made of board half an inch thick, and was as stiff as a coat of mail. For the legs and arms, they have also a covering of netted sennit of the same material, which they put on. That for the legs resembles a pair of overhauls, such as sailmakers use, with straps over the shoulders. The covering for the arms is drawn on in like manner. The appearance of the body was as if it were clothed in pantaloons and jacket of a deep brown colour. This they must find a very inconvenient covering for their hot climate. However singular the body-dress is, that of the head is still more so: it consists of the skin of the porcupine-fish, cut open at the head, and stretched sufficiently large to admit the head of a man. It is perfectly

round, with the tail sticking upwards, and the two fins acting as a covering and guard for the ears: its colour is perfectly white, and by its toughness and spines affords protection against the native weapons.



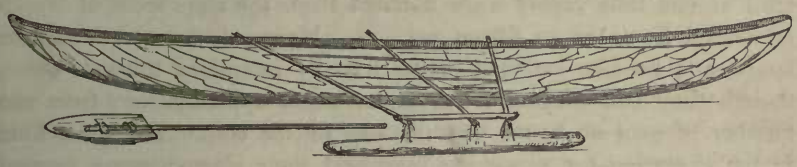
DRUMMOND'S ISLAND WARRIORS.

The ornaments which the natives wore, were strings of beads and human hair. The beads were strung alternately, black and white, and were made of shell and of cocoanut-wood. The strings of human hair resembled watch-guards, and some of them were of the size of packthread. Although the manufacture of this article must have been tedious, yet a great quantity of it was brought off, and bartered for some plugs of tobacco, and a few whales' teeth. Their mats, likewise, constituted an ornament: they were slips of the pandanus braided, and some of these had been bleached, and were of a light straw-colour; others were unbleached and brown: these were interwoven together, so as to produce many kinds of figures, in squares, lozenges, and diamonds. They wore these folded twice, so as to form a triple thickness, which they passed over one shoulder as a scarf, or round the body, securing it with a cord of human hair; the folds of this answered the purposes of pockets, for putting away the tobacco and other articles they had obtained by barter. In default of a mat, they used the lining or upper part of their hat or cap. These mats are about three feet wide by six long.

Their chief desire was to obtain tobacco, of which they seem to be extravagantly fond; it was their constant request, and whilst in their canoes alongside, or on deck, the cry was constantly "tebake." It was not begged as a gift; for, what appeared singular enough for South Sea islanders, they seemed to have no idea of receiving any thing as a gratuity, but instantly made a return of something for whatever was given them. So eager were they after it, that when one had put a piece in his mouth, others would seize him, and actually force it out with their fingers.

Besides the mats, they had fans, fly-brushes, and baskets of different sizes and shapes, with nets and hooks for fishing. Some had wigs, and others carved images, all of which were readily parted with for tobacco. Another article which was brought off for sale, was a kind of treacle, made from the sap of the cocoa-nut tree, which they had in cocoa-nut shells: into these they frequently thrust their fingers, and drawing them through their mouths, smacked their lips most significantly of its goodness.

The canoes of these natives were different from those of any other islanders: their average length is from twelve to fifteen feet; they are from two to three feet deep, and vary from fifteen inches to two feet in width. Each canoe has six or eight timbers in its construction;



KINGSMILL CANOE.

they are well modelled, built in frames, and have much sheer. The boards are cut from the cocoa-nut tree, from a few inches to six or eight feet long, and vary from five to seven inches in width. These are arranged as the planking of a vessel, and very neatly put together, being sewed with sennit; for the purpose of making them water-tight, they use a slip of the pandanus-leaf, inserted as our coopers do in flagging a cask. They have evinced much ingenuity in attaching the upright to the flat timbers, which are so secured as to have all the motion of a double joint, which gives them ease and comparative security in a sea-way, and thus renders them capable of withstanding the waves. They use an out-rigger, much smaller than those of other islands, and the staging or platform covers less space. One of the sides is nearly flat, in which respect they resemble the proa of the Ladrones, as figured in Anson's Voyages.

They are expert at managing their canoes, and seldom use their paddles, which are miserably made, of a piece of cocoa-nut board or tortoise-shell, about six inches square, attached to a round stick; on this account they prefer using their sails. These are triangular, with an inclined or raking mast; they are worked in sailing precisely as those described in the Feejee Islands, keeping the out-rigger always to windward, and tacking in the same way. Their masts are in two or three pieces, as well as the yards, and the whole construction shows that wood is exceedingly scarce, and that it is very difficult to procure enough of it; as a cocoa-nut tree, of which they are made, will yield only two planks, in the mode in which they saw them out. One of the canoes, from the town of Utiroa, which came alongside the first day, was seen to be in part constructed from the bulwarks of a merchant vessel, which had some time before been wrecked; probably of an English ship, as a wreck was reported to have been seen lying on the reef in the beginning of March, 1839.

On the night of the 4th, they were set strongly by the current to the westward, and by morning were fifteen miles to leeward, and out of sight of the island.

On the 5th, they succeeded in regaining their position. Many canoes came off, which continued increasing throughout the day, until at one time eighty were counted from the ship, some of which contained from ten to fifteen persons. Many of these ventured on board, and became satisfied of the friendly intentions towards them, though they still seemed to be under some apprehensions from the number of men on board and the size of the ship. The guns fired in the operation for surveying increased their alarm; many jumped overboard at every discharge, and concealed themselves behind their canoes.

In the afternoon, Captain Hudson on sounding found a bank, on which he anchored, in fifteen fathoms water, at the distance of four miles from the island.

The next morning, the tender was despatched, with two boats, under Lieutenants Emmons and De Haven, to continue the survey.

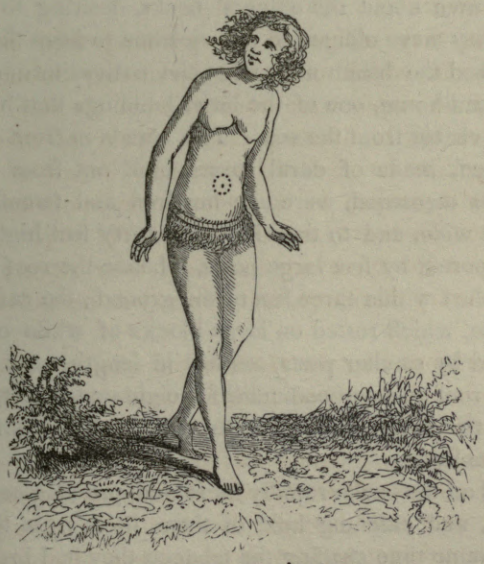
On the 6th, soon after daylight, they had from thirty to forty canoes alongside with different articles of trade; and ninety-two others were in sight from the deck, with from four to five natives in each.

Early in the day, three boats were despatched for the town of Utiroa, to acquire a knowledge of the place and its inhabitants. In them were thirty men, well armed, which was thought to be a sufficient force to secure the officers and naturalists from any attack. Opposite to the town of Utiroa is a long flat, over which, at ebb tide,

a boat will not float; and, as it was low water, it became necessary to walk through the shallow to the beach, which was nearly a quarter of a mile distant.

A very brisk trade was carried on for provisions and articles of curiosity. They had some small fish, which were much esteemed. The fowls offered for sale, as usual among the Polynesian islands, were all cocks, and proved old and tough. These were brought off in neat cages.

Several women were among the crowd, with delicate features and a lively expression of countenance, but remarkably small. Their covering was a girdle, made almost altogether of fringe fastened to a string, which was passed round the body. This garment had, at a distance, a more graceful look even than the "titi" of Samoa. This it obtains from being made pliable by steeping it in some peculiar mixture, which was thought by some of the officers to have the odour of tobacco and molasses. The women were much less tattooed than the men; but, as at the other southern islands, in the same style with them.



WOMAN OF DRUMMOND'S ISLAND.

The same custom was in vogue here that prevails at most of the Polynesian islands, of rubbing noses and exchanging names.

Along the shore of this island, in front of the villages or towns, there are long lines of stone walls, from one to two feet high, serving as fish-weirs or pens. In passing to the shore, they saw a party of

men and women engaged in driving a school of fish into one of them, with long lines fringed with pandanus-leaves, used like a seine, somewhat resembling that before described at Savaii: these fishers took no notice whatever of our party.

When they had approached within one hundred yards of the beach, the natives came forward to meet them; and within a short distance from the beach they passed a small, old, and dilapidated house, built on piles, about eight feet above the water: this old fabric, as we afterwards found, was made use of for telegraphic signals, in case of desiring assistance from their neighbours.

The party were cordially received, both by the men and women, who did not hesitate to advance: all were uncovered, and the majority were women and children. Some of the women were the prettiest that had yet been seen in the South Sea islands; slender and gracefully formed. Their complexion was of a clear brown, with full bright eyes, thick and glossy black hair; and they appeared by no means unconscious of their charms.

The men became at once familiar and rude, seizing their arms and putting their own about the officers' necks, desiring to lead them onward, until they were obliged to use violence to keep them off.

They reached the beach near what the natives termed their "mariapa," or council-house, one of the large buildings that had been before spoken of as visible from the sea. This stands in front of the town, on a broad wharf, made of coral stones, built out from the beach; its dimensions, as measured, were one hundred and twenty feet long, by forty-five feet wide, and to the ridge-pole forty feet high. The ridge-pole was supported by five large posts, whence the roof sloped on each side and reached within three feet of the ground; the rafters descended to a wall-plate, which rested on large blocks of white coral, and were also supported by smaller posts, ten feet in length, near the sides. At the ends, the roof was perpendicular for eight or ten feet, and then they sloped off in the same manner as the sides. The roof was thatched with pandanus-leaves.

The crowd on the beach rapidly increased, pressing around, shouting, gesticulating, and catching hold of them, to express their joy at the visit: at the same time stealing the tobacco they had brought to barter, which operation was performed very dexterously.

No chiefs, however, came forward to receive them when they advanced towards the mariapa, and entered, by passing under the roof. Many natives were inside, who closed around them, and set up a clamour that was deafening. The heat also was oppressive, and with the rancid oil on their bodies, was almost stifling.

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An old man soon made his appearance, whose deportment, and that of the crowd, pointed him out as the chief. He had, apparently, little actual authority, for his presence seemed to have no effect in silencing the natives. He pointed to the palisade around the town, whither he invited them at once to go, and conducted them to his house. Very few of the natives followed. On entering the palisade of slender stakes, the village was found to be divided into lots, containing ten or twelve houses, and enclosed by fences. Each of these enclosures, it was supposed, belonged to a separate family.

The chief led the way to his house, and invited them to enter, which they did, and found its construction altogether different from any before seen in the South Seas. There was nothing remarkable in its exterior; it was of oblong shape, and about sixteen feet wide by twenty feet long. The interior consisted of two stories, of which the lower was not more than three feet high, under the floor of the upper story. It was entered by a square hole at one side. The apartment above was rather a loft or garret, which was high, and contained, apparently, all the valuables and goods of the occupant. The floor was made of small pieces of pandanus-boards, laid on slender beams of cocoanut-wood. It was afterwards understood that this arrangement of apartments was to guard against the inroad of the rats. The lower apartment is used for sleeping, while the upper is entirely for storing their goods and chattels. The wall-plates rest on four beams of cocoanut-wood, which are supported by four posts, one at each corner. These posts are round, and perfectly smooth, so that the rats cannot climb them. The rafters and cross-pieces are mere poles, only an inch or two thick; the thatch is of pandanus-leaf, doubled over a slender stick, and tied down with sennit.

After they were seated, cocoa-nuts, with treacle and water, were brought them to drink. They then requested the chief, whose name was Taina, to show them the fresh-water wells and taro-beds. Under his guidance, they passed through the village, which was situated on a narrow strip of the island, very close to the beach. Beyond it, towards the interior (if the term may be used of that which is but half a mile wide) of the island, was a cocoa-nut grove, extending to the sea. The tall cocoa-nut trees scattered about, with here and there small clumps of pandanus, gave it a cool and refreshing shade, and produced an agreeable impression. Paths wound in every direction, and were quite visible, in consequence of the absence of underbrush. The sandy soil offered only a scanty growth of dry grass (a Sida). Around the houses of the natives were found Cordias, Hibiscus, and Ficus; but they were all of small growth. The Dracæna, of which the Samoans

make the titi, was also seen. The taro-pits were dug to the depth of eight or ten feet, and were fifty feet long by thirty broad; they were planted with taro and api, in rows: in the centre was a few inches of water, and the whole earth was moist. The taro, however, was small, although the natives gave an account of its growing to the length of two feet. The wells were fifteen feet deep; the water in them was brackish. These excavations have been made at much cost of time and labour.

All the party on shore were much incommoded with the rudeness of the natives, who did all in their power to pilfer from them; and, if their attention were diverted for a moment, the hands of a native were felt at their pockets. When detected, they would hold up their hands, with open palms, and laugh. This boldness was more especially confined to a few, and one in particular, a young chief, who was a tall, good-looking person, but had a vain and impudent expression of countenance, which was rendered disgusting by the kind of leprosy before spoken of. It is impossible to give a correct idea of the annoyances that our gentlemen were subjected to from the rudeness of some, the excess of civility of others, and the constant watchfulness that became necessary to avoid the pickpockets. An old man was about smearing himself in cocoanut-oil, with a cup full of salve, in which he would dip his fingers, and endeavour to rub them in their faces. This afforded much amusement to the party, while the natives seemed astonished that the attempt was repulsed; for there was little doubt of its being intended as a great compliment thus to anoint their guests.

In many instances they showed a disposition to get the officers into their power for some evil design. Messrs. Peale and Rich, who were both well armed, had crossed the island in search of birds, plants, and shells; on their return, they visited the town next adjoining to Utiroa, and but a short distance from it. On entering the town, their suspicions were somewhat excited by the number of armed men around. Mr. Peale describes the natives as obliging them to sit down by forcing their legs from under them. These things were permitted to a certain extent, the natives all standing around armed; but a promptness of action, and show of using their arms, extricated them from their difficulties.

In front of the mariapa were three or four houses of the common size, one of which was called by the natives te-o-tabu, or sacred enclosure, but it was only distinguished by its being supported at the corners on blocks of coral. The natives were unwilling that any one should enter this enclosure.

During the day, the greater part of the large number of natives they

had seen, as in the case of those who came on board, were covered with scars, and the scurfy disease, or leprosy. Although the young women were quite pretty, the old were as remarkable for being hideous; of these, a few were seen to be afflicted with ophthalmia and elephantiasis. The maro of the men, although large, was not intended to serve the purposes of decency, but principally for the protection of the abdomen. Their hair was trimmed short in front, but was allowed to grow long behind, where it tapered to a point; in both sexes it was black and fine, with a slight tendency to curl.

After returning to the mariapa, Tama was asked to give them an exhibition of a dance. This he endeavoured to do, but without receiving much attention. At length, the young chief, whom they had found particularly troublesome, came forward, with an insolent and swaggering air, wrapped a mat round his body, from the waist to the knees, and began a dance similar to that of the Polynesian islanders, before described, consisting of movements of the hands and body, but with very little motion of the feet. When the dance was finished, the afternoon was far advanced; the party then returned to the boats, which they had now been able to draw near the beach, in consequence of the rise of the tide. On their way to the ship, the tiny canoes of the natives, with their small white triangular sails, were seen in all directions, coming to the shore. On board, it was believed that upwards of a thousand had visited the ship in the course of the day.

On the afternoon of the 7th, a large party visited the town of Utiroa, equally well armed as the day before, and with the same instructions and cautions that no one should give cause of offence, and if any thing was offered for sale, to pay liberally for it. These precautions were enjoined, in consequence of the belief that the natives were a treacherous and dangerous set of fellows, and were inclined to believe themselves invulnerable in their armour. An opportunity had been taken, before a large number, to show them that the cuirass, &c., was not proof against our weapons at any distance; for which purpose one of the coats of mail was hoisted up at the yard-arm, and fired at: the holes were then exhibited, but did not seem to produce much effect upon them. They manifested a decided disposition for warlike pursuits, and ferocity was the most predominant trait in their character.

On the party's landing, Captain Hudson moved towards the council-house, where they found a large concourse of people, most of them elderly men, who they were informed were the chiefs of the nation: they were directed to one corner, where sat the chief, whom they called Nea. He was a very decrepit old man, nearly bald, with shrivelled skin, and had a stare of vacant wonder; the nails of his

fingers had grown to the length of an inch. His name was Pakoro-koro. Some few presents were given him, but he took very little notice of them, appearing half stupified, and as soon as the articles were in his possession, they were snatched away by the bystanders, without the least shame or hesitation.

The mariapa was a very large building, and in the interior its architecture showed to much advantage: the ridge-pole, with the rafters, were painted in black bands, with points, and ornamented with a vast number of ovula-shells. Chests, made of the thin laths of the pandanus, somewhat resembling cane, were arranged around, about twenty feet apart: these contained only a few mats and cocoa-nuts, things of no value, and are supposed to be for the accommodation of visiters, or used at their feasts. The floor was in places covered with mats of the cocoanut-leaf.

When the ceremony of reception was over, the natives appeared extremely desirous of separating the party, by leading them off in different directions, under the plea of showing them the town, and making them acquainted with some of the females. As soon as they were on the outside of the mariapa, they were surrounded by numbers, and their pockets rifled of their contents in a short time.

Captain Hudson, after they had been an hour and a half on shore, ordered all the officers and boats' crews down to the beach, being satisfied that it was quite time to depart, if he would prevent the collision which he had become apprehensive might take place. As they were assembling for the purpose of embarking, a noise was heard, resembling a sudden assault, from some of the houses near by, and on mustering the men, John Anderson, a seaman, was missing. Lieutenant Walker and Passed Midshipman Davis were sent, each with a few men, in the direction whence the report proceeded, but they saw nothing of him, and all was quiet at the enclosure. The natives began now to assemble in large numbers, armed, and things looked somewhat serious; for, as Passed Midshipman Davis returned to the beach, he was stoned, and one of the men received a severe blow. This was however borne without return. On inquiry, it was found that Anderson had been met but a few moments before the party was mustered. He was armed with a musket, pistol, and cutlass, and was esteemed one of the most correct and prudent men in the ship. The boats were now shoved off a short distance from the beach, and beyond the reach of the native arms, when several muskets were fired to notify him, and his name repeatedly called, which could have been heard in any part of the village; but no Anderson appeared. Captain Hudson finally came to the conclusion

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that he had either been enticed away by the women, or that the natives had detained him, in the hopes of receiving a ransom for his release, and that he would either return in one of the canoes to the ship, or be given up on a reward being offered. Under these impressions, he ordered the boats to return to the ship. Many of the officers were of the opinion that he had been murdered; yet it was scarcely to be believed that they should have been enabled to overcome without noise a well-armed man, and one who had been cautioned against their treachery. After they had pushed off some distance, it was thought that a white man was seen on the beach; but on returning, it proved that they were mistaken.

On the morning of the 8th, it became evident that something had taken place, for not a canoe came alongside before breakfast, which induced a general belief that Anderson had met with an untimely end at the hands of the natives. The people of the adjoining town of Eta, however, so far as they could be understood from their gestures and language, seemed to intimate that the man was on shore alive. Not a canoe, however, was recognised as belonging to the town of Utiroa. A message was (notwithstanding the two towns were at war) sent on shore, in hopes it would induce these savages to restore Anderson, telling them that if the man was given back, a large present of tobacco would be paid for him. This was shown them, and every endeavour was made to ascertain his fate. On looking around among the natives, attention was called to one who was believed to belong to Utiroa. The eagerness with which this man was regarded by all, caused him so much alarm, that he at once sought flight in his canoe; but he could not get his sail arranged, and was soon overtaken by one of the ship's boats. The countenance of the native, on being overtaken, was one of great fear. On finding he could not escape, it immediately changed to one the most amiable and friendly. He began by saying that the boat was good, the ship was good and large, and all that was in her was good. Mr. Hale explained to him what was required of him. It was difficult to ascertain that he understood these things at the time, for the native was inclined to assent to every thing; but Mr. Hale has since had reason to be satisfied from the words he used that the object in view, of obtaining Anderson, was well understood.

The whole of the day was occupied in surveying, and connecting the work with that of the tender, which vessel, with the boats, had returned in the morning. The surveying boats, while engaged, were satisfied that the natives were disposed to be hostile.

Their visiters during the day were all from the other parts of the

island, and were unacquainted with the accident that had happened; but on being informed of it, they made every endeavour to explain that they did not belong to the guilty town. There are fourteen towns on the island, as follows, beginning at the north, viz.:

TOWNS.	CHIEFS.
Muribama or Tenaiay,	Tipera.
Te-niaroku,	Peia.
Terikiai,	Tarentoa.
Eta,	Toarimaroa.
Utiroa,	Tama and Moleia.
Tauma,	Tebakoa.
Kabura,	Tepikau.
Apamarikoro,	Payau.
Parepatu,	Tentaki.
Tewai,	Aiiri.
Tauyaia,	Tauraura.
Puari,	Tapare.
Nukutoru,	Pautua.
Taku,	Putiutoa.

Basing the calculation for the population of these towns on that of Utiroa, which is estimated at from one thousand to one thousand two hundred, it would give this small strip of land as great, if not a greater number of inhabitants per square mile, than any portion of the globe that relies upon its own resources for subsistence.

The four northern towns are apparently united together, and hostile to the southern ones. Between Eta and Utiroa there is a considerable space uninhabited, which appears to form a line of separation between their territories.

Captain Hudson made up his mind that there could be little doubt, after so much time had elapsed without intelligence, and taking into view the conduct of the Utiroans, that Anderson had been treacherously murdered. He therefore believed it to be a paramount duty to punish them, not only for this perfidious act, but to secure their good conduct hereafter, in case of other vessels touching at this island.

In consequence of this determination, the boats were prepared for landing, and Mr. Knox was ordered to anchor the tender in a position near the shore opposite the town, in order to protect them.

The boat expedition, consisting of Lieutenants Emmons, Perry, and De Haven, Passed Midshipmen Davis and Harrison, and Mr. Freeman, the sailmaker, was put under charge of Mr. Walker, the first-lieutenant of the ship, and particular instructions given to him relative to his conduct. These will be found in Appendix III. Messrs. Peale, Hale, and Agate, accompanied the expedition.

The expedition consisted of seven boats; in them were embarked

about eighty officers and men. About nine o'clock they approached the town. The first object that attracted attention was a column of smoke arising from the small building that stood on piles in front of the town before spoken of. On arriving near the beach, the three divisions formed in a line abreast, according to the directions. Lieutenant Walker, with Mr. Hale, (who acted as interpreter,) now showed the white flag, and pulled in toward the beach in front, in order to hold a parley, make further inquiries relative to Anderson, and endeavour to have him given up, if alive. There were about five hundred natives, well armed, on the beach, and others were constantly coming in from all sides: they shouted and shook their weapons with threatening gestures. Many of them, however, seemed undecided how to act; and their whole appearance, though formidable enough, was yet quite ludicrous in the eyes of the men, equipped as the savages were in their cumbrous coats of mail and fish-skin helmets.

As the boat approached, several of the natives advanced towards it, preceded by a chief fully equipped in armour, and holding a spear in his right hand. Mr. Hale then explained the object they had in view, and showed the large quantity of tobacco which they had brought for a ransom. The chief appeared to understand, and pointed to the shore, making signs at the same time for them to come in. The savages who attended the chief had now increased in numbers, and were close to the boat, while the whole body was advancing slowly forwards. Finding that it was not only useless but dangerous to continue the parley, the boat was pulled back into line.

Having thus failed to procure the desired end, the most humane manner of effecting their punishment was conceived to be at once to show them the power of our arms, and sacrifice some of the most prominent among the savages. Lieutenant Walker, therefore, requested Mr. Peale, the best shot of the party, to give them a proof of it, and thus prevent the farther effusion of blood. This was accordingly done by singling out one of the foremost, and a rocket was also discharged, which took its flight towards the great body of them. The latter missile caused great confusion, and many of them turned to seek the shore, but their terror did not last long, and they made another stand, brandishing their spears and weapons as if bent upon a trial of strength with their opponents; the falling of their chiefs was disregarded, and few seemed to consider the effects produced, except those who were wounded. A general volley soon followed, which caused them all to retreat, some in great haste, while others moved more slowly towards the shore, seeming to be but little impressed

as to the character of our arms. The wounded and dead were all carried off. The boats now pushed in for the beach, and by the time they had reached it, there was not a native of the whole host to be seen.

The three divisions then landed, and the first and second proceeded to fire the mariapa and town, while the third remained to guard the boats. The whole was soon in a blaze, and but a short time sufficed to reduce it to ashes. The natives were still to be seen in small parties, out of reach of the guns, among the cocoa-nut groves. After the work of destruction had been effected, the divisions again returned to the boats. The place now exhibited a very different picture from that it had presented only a short hour before. The blackened sites were all that remained of the former dwellings, the council-house was entirely in ashes, the fences were torn down, and the cocoa-nut trees leafless.

The tide having fallen, three bodies were found, one of whom was the young chief who had been so troublesome and insolent to our gentlemen, and who it was believed had been active in the murder of poor Anderson.

While the party were getting ready to embark, a small party of natives were seen coming towards them from Eta; these were all unarmed, and had cocoa-nut leaves and mats tied round their necks: they had come to assure our party of their good-will, and their joy at the destruction of Utiroa. One old man in particular repeated frequently his assurances, with much laughter and many grimaces. No sooner had they ascertained that the intentions towards them were not hostile, than they began to pillage the burning town.

The number of houses destroyed was supposed to be about three hundred, besides upwards of a dozen large canoes. The loss of life was twelve on the part of the natives: there was no one injured on our side.

From the fact that the natives had left every thing in their dwellings, it was clear that they did not anticipate the fate that was to befall them; that they were in hopes of being able to cut off our boats, and perhaps flattered themselves with the prospect of an indiscriminate plunder. This would be in perfect accordance with their customs and constant practice of attempting to cut off all vessels or boats that may visit their islands. Although I have no reason to come to this conclusion from our own knowledge respecting this island, yet from all the accounts of those who have resided some time among like savages, their first idea is always to capture or possess themselves of

the vessel or any of the boats. We have seen that this is put in practice among the Feejees, and others, who regard all vessels wrecked as sent to them as a gift from the gods.

Very few articles escaped the general conflagration, but of these some were brought off to the ship; among which were two skulls, that had been well polished and cleaned. These were found in the loft of one of their houses, and had evidently been preserved, with great care, as relics.

There are but few domestic animals on this island: a dog, two or three cats, and a few fowls, were all that were seen. Rats are in abundance, as has been shown by the care the natives take to protect their lofts from these very troublesome creatures.

The food of the inhabitants consists principally of fish, cocoa-nuts, the fruit of the pandanus, taro, and api; to these may be added tobacco. They have but few modes of dressing these articles. The fruit of the pandanus they use as food, which was considered by the natives as a great delicacy; it may be said to be exceedingly coarse, so much so, that the fibres of the pandanus are seen in their excrement in great quantities; even the husks of the young cocoa-nuts are eaten.

No land-birds were seen but curlews, golden plovers, turnstones, noddies, and white terns; many whales' bones were strewed over the beach.

This was the first place where they had observed the Tridachna gigas: they were of enormous size; the natives used them for troughs, for many purposes, around their houses.

Necklaces of human teeth were also prized, and brought off for sale.

During the day of the 9th, the thermometer stood in the sun at 159° Fahrenheit.

The character of these islanders is the most savage of any that we met with; their ferocity led to the belief that they were cannibals, although no positive proofs were seen of it. They are under no control whatever, and possess little of the characteristic hospitality usually found in savage nations. It was observed also that their treatment of each other exhibited a great want of feeling, and in many instances, passions and propensities indicative of the lowest state of barbarism. Their young girls were offered to be disposed of, by their fathers and brothers, alongside the ship, openly, and without concealment; and to drive a bargain for them, was one of the principal objects of their visits to the ship.

Among their weapons, they have a short spear, which is armed with

half a dozen barbs from the tail of the raja or stingray, which is supposed to prove mortal, if broken off in the wound. They have also a club, about four feet long, made from the cocoanut-wood, which is pointed at each end; it is used for warding off a spear, to make a thrust, or wielded as a club.

In the use of tobacco, they are truly disgusting, for they eat it and swallow it, with a zest and pleasure indescribable. Their whole mind seems bent upon obtaining this luxury, and consequently it will command their most valuable articles.

They are, to all appearance, a lawless race, and no sort of government seems to control them; all seize upon whatever property they can, and, as has been before mentioned, the very chiefs themselves were subject to the same treatment that they observed towards our party; the greatest villains and bullies among them seemed to have the most control; while the chiefs had little more than nominal authority, and if they had any privileges, they did not seem to extend beyond their small enclosures.

There is neither wood nor water to be obtained at this island, and no inducement to visit it, except to trade for a few cocoa-nuts and curiosities.

Good whaling-ground exists in the vicinity, and our whalemen are in the habit of cruising in this neighbourhood: those who visit these wretches ought to keep a constant guard against treachery, for their numbers are large, and they are prone to mischief. All intercourse with them should, therefore, be conducted with great caution, especially in ships weakly manned.

It is to be hoped that the punishment inflicted on Utiroa for the murder of Anderson will be long remembered, and prove a salutary lesson to the numerous and thickly-peopled towns of Taputeouea, or Drummond's Island.

On the same evening, (the 9th,) they weighed anchor, and on the next day made Bishop's or Sydenham Island, which they surveyed the following day.

Off the north point of Bishop's Island, there is a shoal extending one and a half miles to the northward and westward, the water on which is discoloured, and where the Peacock found nine fathoms. The native name for Bishop's or Sydenham Island, is Nanouti; it lies in latitude 00° 36′ S., and longitude 174° 24′ E.; it is of coral formation, and a mere ledge of land, like Drummond's Island, with a lagoon, reef, and bank, on its lee or southwest side. The survey made it nineteen miles long, trending northwest and southeast, and its width, including lagoon and reef, eight and a half miles. On the southwest and northwest

portions of it, there is a coral bank, from one to one and a half miles beyond the reef, on which there is ten fathoms water. At the distance of four miles from the northwest end of the island, they found soundings in two hundred and sixty-five fathoms.

The island is partially covered with cocoa-nut, pandanus, and other trees; and the islets of which it is formed are nearly continuous, connected by the usual coral reef. They had no communication with the natives of Nanouti. A daily intercourse is kept up between it and the Drummond Islanders. It was thought there was no difference in their characters. The distance between them is but fifteen miles.

From the north point of this island, there was a small island in sight, which was at first supposed to be Duperrey's Isle du Nord; but if it be, instead of being located to the northward, as he has placed it, it bears nearly south of the north extreme of Nanouti. They found, on proceeding towards it, that it was a hummock, connected by a reef with Nanouti; but no Sable Island could be seen. The tender passed round the opposite side of Nanouti, and did not see any island; and the officers of both vessels are fully convinced that no Sable Island exists.

On the night of the 10th, they had much thunder and lightning, with a heavy swell from the northeast.

At daylight on the 11th, they made Henderville Island, called by the natives Nanouki. The weather was too unfavourable to proceed with the survey. Simpson or Harbottle, Hopper, and Woodle Islands, were in sight. The weather continued stormy, with heavy thunder and lightning.

On the 12th, they succeeded in surveying Henderville Island, and connected it with Woodle Island. Towards night they again had stormy weather, with the wind from the eastward. Henderville Island was determined to be in latitude 00° 11′ N., and longitude 173° 39′ 20″ E. This island is six and a half miles long, east and west, and five and a half miles wide at the east end, diminishing to two miles at the west end: it is of coral formation. There are two towns on the west end, and several on the east and southeast parts, and it is thickly inhabited. The natives who came on board said that the two ends of the island were at war with each other. They are very much the same in appearance as the natives of Drummond's Island; were naked, and spoke the same dialect. These natives knew of the islands in their immediate vicinity, as well as the direction of Taputeouea, or Drummond's Island, and gave them the name of being inhabited by a savage and hostile people. This island affords neither wood, water, nor refreshments: from appearances, its inhabitants must be at times much stinted for food. They brought off nothing except a few cocoa-nuts;

but the object of their errand was not to be misunderstood, for in each canoe there was a woman, which I think does not speak much in the praise of the whalers or other ships that frequent this cruising-ground. While on board, one of the natives gave them an exhibition of a dance, which was different from those before seen, inasmuch as it consisted of a variety of motions and moving from one place to another, in quick steps, and in throwing about the arms, with many contortions of the body, and vehement gesticulations. The dance was accompanied with a kind of song or chaunt, consisting of the monotonous repetition of words, uttered in a short, quick, and distinct tone; each dance was finished with an outstretched hand, and an earnest cry of tebake.

It was next determined to survey Hall's Island, called by the natives Maiana, as the fair wind and the night would enable Captain Hudson to accomplish it and return to complete that of Woodle Island, or Kuria. Maiana is of coral formation; the northeast and southeast parts are continuous land, whilst to the southwest and northwest it consists of a reef and bank, in some places awash, with a sand-spit in its lagoon. The western sides of the island are therefore very dangerous, and should be approached with caution, as the sea seldom breaks on them, and the discolouration of the water is not at all times to be observed. The natives of this island have the same appearance as those already spoken of, and use the same dialect: only one canoe came off, and held a short communication with the ship. The island appears to be thickly inhabited, but its natives have had little intercourse with the whites. It affords neither refreshments, wood, nor water. The survey makes this island nine miles long, in a northeast and southwest direction, and six miles in width, in a southeast and northwest direction: it is situated in latitude 00° 56′ 45″ N., and longitude 173° 04′ 15″ E. On its west side, on some of the banks, there is anchorage in from ten to fifteen fathoms of water.

On the morning of the 15th, they made the island of Apamama, the Hopper Island of Duperrey, and the Simpson's Island of the charts of Arrowsmith. It is about five feet above the surface of the ocean; is ten miles long, northwest and southeast, and five miles in width, north and south. The land is continuous on the north and east sides, excepting two small strips of bare reef. There is anchorage on the west side in an opening between the reef and the northwest point of the island, which is about two miles wide. The soundings vary from two to five fathoms: across it, in some places, the bottom is broken coral; in others, it is coral sand. The entrance to the lagoon, although feasible, should not be attempted through this passage; but there is a good passage into it on the southeast side of the island, which is a mile

wide. A survey was made of this island, and its anchorages examined. The boats when ashore communicated with the natives, who resemble those of the adjacent islands. It has a large population, but yields little more than will supply their wants. A small quantity of fresh water may be had by digging on the beaches: wood and refreshments are not procurable for shipping.

This island is situated in latitude 00° 27′ 21″ N., and longitude 173° 57′ 30″ E.: it has heretofore been represented as two islands on the charts, called on one Simpson's, and the other Hopper and Harbottle; but there is only one, joined by the same reef.

They next returned to Kuria or Woodle's Island.

On the 16th, while engaged in the survey, some canoes came off to the ship, when the natives came on board without hesitation,—an evidence of their having had communication with ships, and their confidence of good treatment. It was soon reported, that a white man was coming off; and, as in all such cases, he was looked for and watched with great interest, and various surmises were made relative to his origin and history. They were not long left in doubt, for before he reached the deck, his voice bespoke him an Irishman. He was dressed in a pair of duck trousers and red flannel shirt, and announced himself as "John Kirby, a deserter from the English whale-ship Admiral Cockburn." He said he had been on the island for three years; that he was living with the daughter of the principal chief; and solicited a passage to some civilized place.

The principal chief of the island, with his daughter, whom Kirby had for a wife, came on board with him. They both seemed deeply affected, when they learned that he had received permission to remain on board, and was about to leave them; and both endeavoured to dissuade him from going.

His wife showed much concern, and wished to accompany him: the old chief, her father, endeavoured to persuade him to take her. Finding she could not prevail, she requested as a parting gift, an old jack-knife, the only property he had left to give. Several presents were made to her by the officers and men, which reconciled her somewhat to her lot. The natives all left the ship much gratified, excepting Kirby's wife, who continued to be somewhat downhearted.

Kirby proved an intelligent man: he understood the language, and was well acquainted with the character, manners, and customs of the islanders, among whom he had lived from the 11th of February, 1838, to the 15th of April, 1841. His presence in the ship afforded Captain Hudson an opportunity, not only of communicating with the natives

more freely, but of obtaining much interesting information relative to this group.

Kuria or Woodle's Island has four towns on it which Kirby estimates to contain between four and five thousand inhabitants. Its geographical position is in latitude 0° 14′ 30″ N., longitude 173° 27′ E.: its greatest length is five miles, northwest and southeast, and its greatest width, which is at the southeast end, is two and a half miles. The remainder is very narrow, and almost divided towards the centre. The northwest portion has two small lagoons, two or three hundred yards from the beach; the water in them is not so salt as the ocean. In one of them, the bottom consists of red mud on one side, while it is a white clay on the other. They are used as fish-ponds by the chiefs. There is a reef extending to the northwest nearly three miles.

The island is but partially clothed with trees, consisting of cocoa-nut, pandanus, and a few stunted bread-fruit. It has no outer reef, and may be approached very closely. It affords neither wood, water, nor refreshments. The natives who visited the ship brought off very little for trade: fish-hooks and lines, small mats, cocoa-nut syrup, and a few cocoa-nuts, composed their whole stock.

The females that accompanied the canoes wore the maro, and were thought to be better-looking than the others of the group; but their whole manner was in keeping with the purposes for which their fathers and brothers had brought them off.

No war implements were seen; the men, who were naked, resembled the others of the group, except that they did not appear so much disfigured by scars.

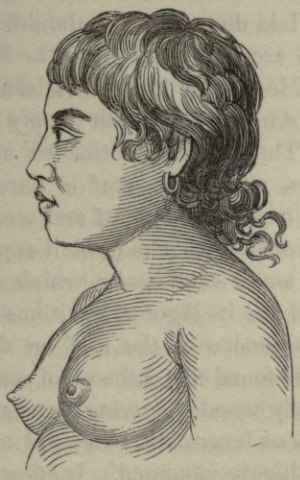
Kirby states, that on the first night of his landing, they stripped him of every thing but an old pair of trousers, after which he was conducted to a great conclave of natives, assembled around a large fire, which he then believed was intended to roast him. He had fortunately gone on shore in the highest chief's canoe, and placed himself under his protection, as well as he knew how. After some considerable talk, instead of being roasted, he was furnished with a wife, and taken to reside with his friend, the principal chief, who, with the rest of the natives, ever after treated him kindly. After a few months' residence in the family of the chief, he gave his own daughter to Kirby for a wife. The result of this was much jealousy and envy between his first wife, of common origin, and his last, of high rank, until the former was ousted and sent back to her parents, leaving the chief's daughter in quiet possession of the house.

During Kirby's residence on the island, several English, and one American whaler, had been off the island, on which occasions he had

been employed as pilot and interpreter. The natives were constantly asking him, after their departure, why he "did not fool the vessels and run them on shore, that they might plunder them." One of the above vessels left two pigs, two goats, and a pair of Muscovy ducks; but no sooner had the vessel left, than they killed them all, from some superstitious fears, and threw them into the sea, notwithstanding all Kirby's remonstrances and entreaties to have them spared, and allow him to eat them.

Kirby says that the natives, though not professed cannibals, sometimes eat human flesh; but their food is generally fish. They do not eat fowls, and will not raise pigs, on account of their filth. Their treacle is extracted from the spathes of the cocoa-nut trees, an operation which, if frequently repeated, destroys the tree. They are very fond of cock-fighting.

The conduct of foreigners who visit these islands is sometimes of a most outrageous character. Instances of this kind are daily occurring, a number of which came to my knowledge; and the following occurrence it seems to me is of a character that ought to be made public, in order to bring such conduct, and the persons who are guilty of it, to tne notice of their own nation.



NATIVE GIRL OF PERU ISLAND.

Some four or five months before the Peacock's visit, Kirby states that one Leasonby, master of the whale-ship Offley, of London, and whose mate was an American, named Lake, landed six young girls on this island, whom he had obtained at Peru, or Francis Island. After

having kept them on board several days, he brought them here to save himself the trouble of beating his vessel up to the island to which they belonged.

These young girls were extremely good-looking, and are now slaves to the chief of this island, and made to labour and satisfy his lusts. They were landed on Kuria, in despite of their entreaties and tears. These people are in the habit of killing all strangers from islands not connected with their immediate group; but the lives of these girls were spared, and they were retained in bondage. Two of them were brought off to the ship, who entreated most earnestly to be kept on board, and to be carried to their home. The engraving on the preceding page is made from Mr. Agate's drawing of one of them.

The published charts of these islands were found so inaccurate, as to be a cause of danger rather than of safety; for in them the islands are multiplied, and every hummock or detached islet on the same reef is represented as separate, and a name assigned it. Thus a confusion exists, that it is almost impossible to unravel. How so many errors could be committed, can only be accounted for by the fact that those who had the publication of the charts formerly were generally ignorant, and did not take that care to sift and examine the information that was essential to accuracy.

Several islands are laid down here on the different charts, but those only really exist which are named Tarawa, or Knox Island; Apia, or Charlotte Island; and Maraki, or Matthew's Island.

Tarawa, or Knox Island, is in length twenty miles, trending northwest and southeast. The land is continuous and wooded, with the exception of four gaps, where the reef is bare. The south side is twelve miles long, and trends nearly east and west. On this part, near the western end, are three hummocks (which appear like islands in the distance), and several small sand-banks, which are connected by the same reef. This island has its lagoon, but it has the appearance of an extensive bay, in consequence of the reef on the west side being a sunken one, on which is found five fathoms of water.

This island is partially wooded, having several groves of cocoa-nut trees on it, and a dense undergrowth. Several towns were seen on it, and it appeared to be thickly inhabited. It affords no supplies for vessels. Three canoes came off to the ship, two of which kept at a respectful distance, while the third approached with great caution. Some few pieces of iron hoops enticed the natives on board, but they brought nothing for trade, except half a dozen cocoa-nuts. They stated that they had never seen a vessel before. This may be true, but appeared somewhat incredible, when they are so near other islands

which have had constant intercourse with shipping. They appeared entirely ignorant of the use of tobacco, which it will be recollected the other natives coveted so much; and what seemed to confirm the belief in the truth of their assertion of the visits of ships, was the absence of females in the canoes, which had been with the natives of the other islands so prominent an article of barter.

They seemed delighted with the pieces of old iron, and regarded junk-bottles with admiration. They are entirely the same in appearance, and in character and customs, with the rest; they go naked, and speak the same dialect.

Tarawa lies in latitude 1° 29′ N., and longitude 173° 05′ E., and is of coral formation.

Until the 24th, they were engaged in the survey of Apia, or Charlotte Island. This consists of strings of coral islets, situated within a reef, which is six and seven feet above the water. The reef has a bluff front, and is much worn by the sea. There is no coral sand. Apia was found to be in latitude 1° 52′ N., and 173° 02′ E. It is a lagoon island. Its length in the direction of northeast and southwest is sixteen miles, and its average breadth five. On the east side of the island the land is covered with cocoa-nut and pandanus groves, with some undergrowth. The northwest and west side is a continuous reef, four or five feet above the water's edge, on which are many islets. About the centre of the reef, on the southwest side, is a ship's channel into the lagoon, which is half a mile wide. Near its entrance is a small islet, which stands alone, and is a good mark for the entrance. There is no island in the lagoon, as shown on the French charts of Duperrey.

This island would appear to be thickly inhabited, from the number of towns on it. Several canoes came off to the ship, which were similar in construction to the others we had seen. Their stock of articles for trade was, as usual, scanty. There was but one woman seen, and she proved as ugly as those previously met with had been pleasing in their looks. They speak the same dialect, and are the same people, although their intercourse seems to have been very much confined to themselves. At the islet near the entrance to the lagoon, about sixty gallons of water were obtained from the native well, but it was flat and brackish. No other supplies can be procured at this island.

When the boats landed at the islet, the natives were in great alarm, and fled; but, reassured by the calls of Kirby, they returned, and their fears were effectually quieted by a few presents.

It was ascertained that their knowledge of other islands only extended to Tarawa, or Knox's Island, and two others. To one of these

they pointed in a direction west of north, and called it Maraki,—Matthew's Island; and the other Taritari and Makin, which they said were two days' sail, and which was believed to be Pitt's Island.

In the centre of the little village was one of the sacred stones, which was described by Kirby as an object of worship. It consisted of a flat slab of coral rock, about three feet high and two wide, set up on end and dressed with a thick wreath of cocoanut-leaves. It was placed in the centre of a circular platform of sand and pebbles, about nine feet in diameter, raised five or six inches above the soil, and surrounded by a ring of stones. At the foot of the coral slab were several large cocoanuts, placed there as an offering to the divinity, whom the natives styled Tabu-eriki. The wood-cut at the end of the next chapter is a drawing of one. The priest, a young man, with a mild and intelligent countenance, remained constantly near the stone, never quitting the platform for a moment. The houses were built like those of Drummond's Island, but the scuttles into the lofts were much larger, occasionally occupying half the dividing floor. In some of the houses there were two or three floors or stages, the second about two feet above the first.

In the survey of this island the tender got aground inside the lagoon. The moment that it was discovered by the natives that the vessel was on shore, they began to flock around her, and were only kept off by being fired at. Lieutenant Emmons did not join her with the boats till after dark, when he found her situation such as to require great vigilance on the part of the officers and men to preserve her. She had taken the coral reef at high water, and the tide was rapidly falling, leaving her on her bilge, and rendering her guns of no use for protection. The natives were making signals by burning fires, blowing war-conchs, and evincing every disposition to attack her.

Captain Hudson, who observed the situation of the tender at sunset, determined to keep the Peacock close to the island throughout the night, to be near at hand to despatch boats in case of signal being made that they required more aid, should the natives show a disposition to make an attack, and overpower the force that had already gone to the tender's assistance. The Peacock was hove-to, with a moderate breeze blowing, and from the fires seen during the night they believed themselves close to the position they had taken at sunset. At daylight, while lying-to, they drifted on a coral sand-bank, where the ship was aground for a few minutes only. Their surprise was great when they found that it was Tarawa or Knox's Island, on which they were ashore, on its northwest side, and that they had drifted fully twelve miles by current to the southward during the night. On board of the

tender every preparation was made to receive the savages, as it was anticipated that the attack would be made at early daylight. They were not mistaken in this, for at that time the natives were seen in great numbers, but just then fortunately the tender floated. The natives continued, however, to approach boldly until within musket-shot, when they were motioned to keep off, which they disregarded. The headmost canoe having struck its sail for the purpose of closing alongside, Lieutenant Emmons fired his rifle, aiming so that the ball should pass close by the head of the steersman: this alarmed him so much that he immediately jumped overboard, and was followed by all the rest. The remaining canoes now kept off; but continued to follow the tender until she left the lagoon, which she did by the passage through which she had entered. When the natives found that the prize had escaped them, they became outrageous, making use of many violent gesticulations of the disappointment they had experienced.

The next island that claimed their attention was Maraki, or Matthew's Island. It is much smaller than the two last, and situated in latitude 2° 00′ N., and longitude 173° 25′ 30″ E. It is a lagoon island, without entrances, and of coral formation. It is but five miles long, north-by-east and south-by-west, and two and a half wide at its base, being of triangular shape.

It appears to be densely peopled, for many villages were seen, and after dark a large number of fires were burning.

A canoe ventured alongside, in which was one of the natives, of an herculean frame, and calling himself a chief. When asked how many people they had on the island, he replied, as many as were on board the ship. As all hands were on deck, it is supposed that his simile was equivalent to a multitude.

The persons in this canoe were exceedingly desirous of getting old iron hoops: they did not remain a long time on board, and seemed to be uneasy. After they had obtained these small presents, they quietly abandoned the ship, and on getting into their canoes, soon plied the paddles in such a manner as showed that they were quite anxious to get out of reach, seemingly congratulating themselves upon their miraculous escape. Their dialect and customs were the same as those of the rest of the group.

On the 27th, the Peacock left Matthew's Island to look for Pitt's Island, which they made on the 28th, at 9 A. M. On the 29th, the weather permitted the survey to be made.

There are two islands known under this name: the largest is called by the natives Taritari, and the smallest, Makin. The latitude of the southern point of Taritari is 3° 08′ N., longitude 172° 48′ E. This

island is of the figure of a triangle, with its apex to the south, and its sides are about fourteen miles in length. The southeast side is a continuous grove of cocoa-nut and pandanus, with some undergrowth; on the other two sides is a reef, which is awash, excepting the northwest point, in which there is a small inlet.

Makin is of much smaller dimensions, being but six miles long: it varies in width from half a mile to a mile. Its northern point lies in latitude 3° 20′ 43″ N., and longitude 172° 57′ E. This small island is the seat of government, and the natives now unite both names under the one of Makin.

It was soon evident that the island was thickly inhabited; for when the ship reached the lee side, in the afternoon, about twenty canoes came off, containing from five to ten natives in each, and in one of them was a white man, who was clothed in mats. The ship was immediately hove-to to take him on board, and he gave his name as Robert Wood (alias Grey), a Scotchman by birth, who was left by his own wish on the island, seven years before, by the English whaling brig Janie, of London, sailing from Sydney. He was under so great excitement as to render his utterance quite unintelligible at times, and some amusing scenes took place in consequence. On his reaching the deck, he first inquired if he would be permitted to go on shore again; and then, who was king of England; if there was peace with America; for he had thought there must be a war. He had seen no white men since he landed, and said that he had become old and grayheaded. To prove the latter assertion he pulled off his apology for a hat, and displayed a most luxuriant growth of jet-black hair.

He had not been on board long before he asked for a passage to some civilized land; and when he was informed that his wishes would be gratified, he seemed for a time beside himself from excess of joy. His feelings were evinced in his endeavours to interpret the questions to the natives; he almost invariably repeated to them what was said to him in English, in the same language; and gave back their answers or expressions in the island dialect. This had a droll effect, and he had frequently to be reminded that he was an interpreter.

Wood says, that the natives had always treated him kindly; and for the first few months after his arrival among them, they carried him about on their shoulders (he was the first white man that many of them had ever seen), and almost deified him. They have no wars, and very few arms, and seldom quarrel, except about their women. The punishment of death is inflicted on those who infringe the seraglio of the chiefs.

In the short intercourse the Peacock had with the natives of this

island, a great difference was perceptible between them and those of the other islands, as well in respect to their appearance, as in character. Their features were regular, and by some thought handsome; they had fine teeth, with glossy black hair, flowing in ringlets about their heads; they were also of a lighter colour than the rest of the natives with whom they are grouped; their figures are, for the most part, rotund, and they seem to have an abundance of food to become fat upon. In walking, they appeared like a moving mass of jelly; every laugh set not only their sides in motion, but their whole frame and flesh. On being asked how these people became so fat, Wood replied, they had plenty of food and "toddy" to fatten upon: this last is a syrup, called by the natives "karaca," made from the sap of the young cocoa-nut trees: of this they drink immoderately. They wear mustaches and whiskers, which are highly prized and carefully nursed among them. They had a good-humoured cast of countenance, and seemed peaceable and full of kindness. No scars were seen on their bodies, neither had they any warlike instruments with them. All the little casualties which so often affected the harmony of the natives before, here produced no sort of disturbance; and each was inclined to render the other assistance in repairing the accidents.

NATIVE OF MAKIN ISLAND.

The men are very handsomely tattooed, of which the above cut will give a correct idea. On their reaching the ship, they appeared

to put the fullest confidence and reliance in the treatment they were to receive, although, according to Wood, they had seen but one vessel during his residence on the island, and consequently it could not be from the habit of intercourse, but must have been a natural feeling. There was no begging, no attempt to steal, as among all the other natives of the group; but Wood gives them credit for the latter propensity among themselves on shore.

Their canoes are larger and better built than those of the southern islands, and made of different wood; and they are better supplied with masts and paddles, but still of nearly the same shape: the side of the canoe opposite to the out-rigger, was much less curved than the other, resembling more the "flying proa" of the Ladrone Islands.

Polygamy is common among them; and Wood stated that some of the principal chiefs and landholders have from twenty to fifty wives: the king even exceeded this number; while the poorer class and slaves are doomed to perpetual celibacy. The consequences of this state of society may readily be imagined to produce illicit intercourse among the lower classes.

The women are well treated; never offered for traffic, but on the contrary, are held sacred; and in order to restrain any unlawful indulgence on the part of his wives, his majesty has at times had some of them sewed up in mats! Wood represented the women as outnumbering the men, and said they were very handsome. There are five towns on the island, which, according to the authority of Wood, contain about five thousand inhabitants.

The king, whose name was Tekere, came off to the ship. He was a fine-looking man; but his corpulency was great, and appeared to trouble him not a little: it was utterly impossible for him to get up the side of the ship, and he therefore contented himself with being paddled round it. His father, the former king, Jakintebuat, came on board, with several of his sons, all of whom had a strong family likeness. He appeared about sixty years old; and although a little bald, he had no other appearance of age, either in his looks or the firmness of his step.

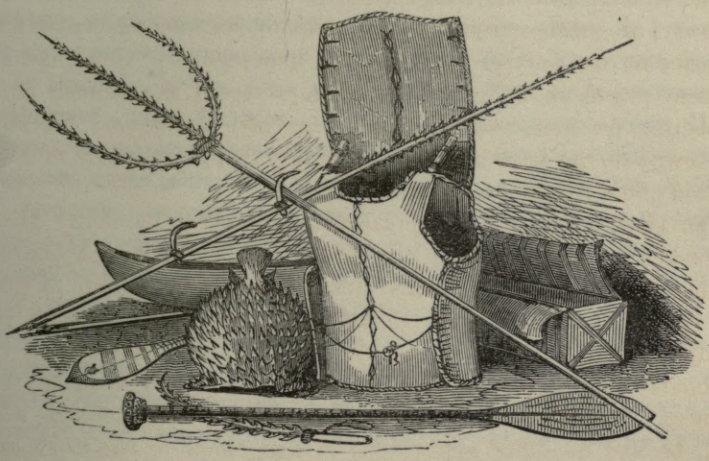
When the vessels had made sail, in order to leave the island, and it was supposed that all the natives had left the ship, one was found hanging to the man-ropes near the water. Wood, on questioning the native, found that he was a petty chief, who wished to accompany the ship, and had taken this means of doing it, hoping not to be perceived until he was out of sight of his island. He said he was too poor a chief to have any wives, and therefore wished to leave his island, and be landed on some other, where he could obtain some. Captain Hud-

son had a boat lowered at once, by which he was put on board a canoe, that took him to the shore.

Two or three of the officers landed for a short time, but saw nothing except a few fishing huts. Under the eaves of the huts, large shells of the Tridachna gigas were placed to catch water. The entrance into the lagoon has four and a half fathoms of water, and is about one-third of a mile in width.

Mr. Peale found no quadrupeds except rats, which were in great plenty, and running in all directions; of birds there were but few; white terns and noddies were seen in the groves, and a few moths were caught.

Mr. Rich found some tall Pisonias, Tournefortias, two species of Urticæ, a Boerhaavia, and some cocoa-nuts. On the larger island they seem to have a much greater variety of trees, but it was not visited. They have bread-fruit, taro, and yams of two kinds, which are cultivated in the manner already described.



ARMS, ARMOUR, ETC., OF THE KINGSMILL GROUP.

CHAPTER III.

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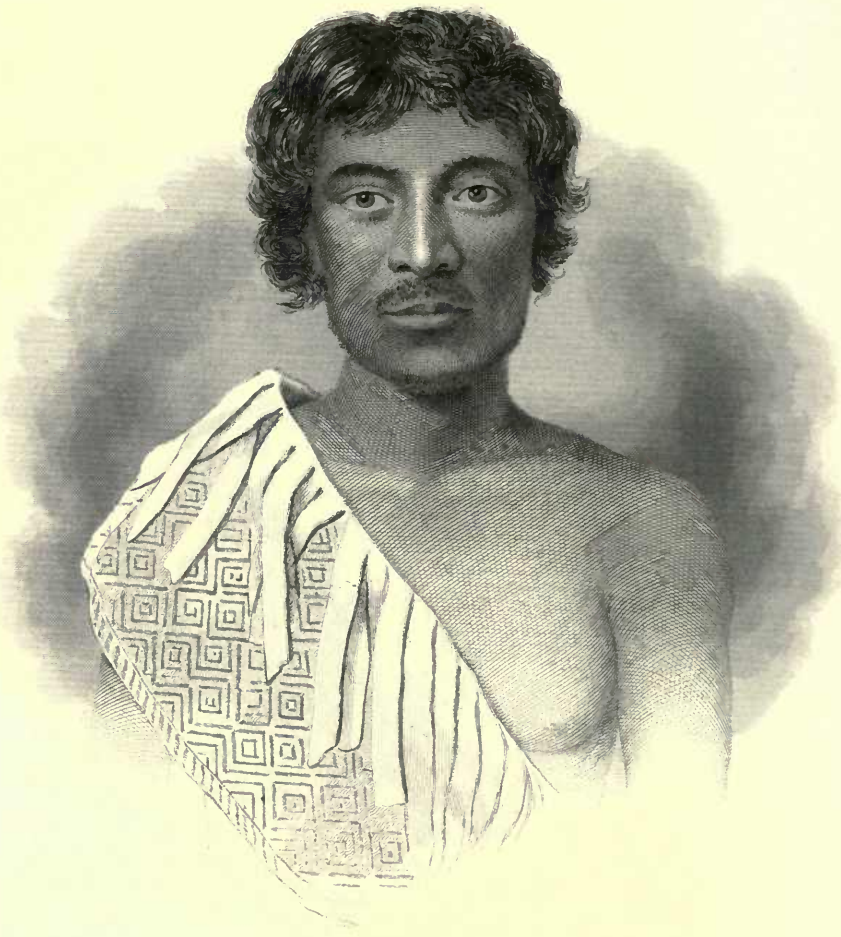
CALIFORNIA



CHAPTER III.

MANNERS AND CUSTOMS OF THE KINGSMILL ISLANDERS.

1841.

In order to obtain all the information possible from Kirby and Wood, Captain Hudson placed them under the immediate control of Mr. Hale, the philologist. This gentleman had thus an opportunity to examine and cross-question them, during the whole time they remained on board the Peacock. To his report to Captain Hudson, I am principally indebted for the following information respecting the entire group. Captain Hudson states to me, that the opportunity Mr. Hale enjoyed was the very best for eliciting information, as they were upwards of a month on board the ship, and were under examination day after day.

Their accounts are deemed entitled by Captain Hudson and his officers to much credit, from the fact that many things had passed under their own eyes that perfectly agreed with the accounts that Kirby, in particular, gave; and he was found to have obtained much fluency in speaking their language. It is likewise some confirmation of Kirby's account, that Wood's in many particulars corresponded with it, and in all as much so as could be expected between islanders that, although allied in race, are now living under totally different circum stances. Wood, it must be observed, had not, though a much longer resident than Kirby, acquired so thorough a knowledge of the language, or of their manners and customs, principally, it was thought, from a want of aptitude for such observation.

The Kingsmill Group consists of fifteen islands, of which the geographical positions have been already given in speaking of them separately.

They are as follow, viz.:

NATIVE NAMES.	NAME ON CHARTS.
Maraki,	Matthew's Island.
Makin and Taritari,	Pitt's "
Apia,	Charlotte's "
Tarawa,	Knox's "
Maiana,	Hall's "
Apamama	Hopper's "
Kuria,	Woodle's "
Nanouki,	Henderville's "
Nanouti,	Sydenham "
Taputeouea,	Drummond's "

The above are all those that were visited by the Peacock: the natives, however, gave the names of others, which are said to be in the neighbourhood, to the number of six.

Peru,	Francis Island.
Nukunau,	Byron's "
Arurai,	Hurd's "
Tamana,	Phœbe "
Onoutu,	Rotcher's "

The first of these five are known on the maps, but the two last are not. There is one which the natives of Apia designated by Tarawa-ni-Makin, but I am inclined to believe it was intended for Pitt's Island.

The dimensions of these islands have been given, as well as the facilities they afford ships, and the inducements to visit them. The highest land of the group is not more than twenty feet above the sea, and they are all of coral formation, having a general resemblance to the coral islands spoken of in the early history of this voyage. It was found that, unlike those, many of the islands of this group afforded anchorage on sand-banks under their lee, or western side, and in some of them the leeward reef appears to be in part wanting: this would form a distinctive character, and Kirby bears testimony to the fact that these islands are fast wearing away by the action of the sea on them during the westerly gales.

The compact coral shelf is found at the depth of twelve feet beneath the surface. There is another distinctive mark, which tends to prove that these islands, instead of increasing, are actually wasting away, which is, that in all cases where the island is at all exposed, it has become a string of detached islets, a form it would be most likely first to assume in undergoing such a change. Those containing passages through the reef have been already pointed out; and in the Hydrographical Memoir, full directions for entering the lagoons will be found

Their soil, which is but a few inches in depth, is of coral sand and vegetable mould, below which coral sand continues to be found, and to this depth the wells and taro-patches extend. The rain-water percolates thus far, and meets the coral rock. Besides this rock, small pieces of pumice are found, which are supposed to have drifted to the island. Of these great use is made, in cultivation, as a manure.

Their cultivation consists for the most part in that of cocoa-nut and pandanus, which are their chief articles of food. They also cultivate with great care a species of the taro (Arum cordifolium), which is called by the natives "pôipôi," and is said to grow to a very large size; but all that was seen by the officers was small, and apparently withered.

Bread-fruit trees are to be found on the northern islands, but the tree was not seen on the southern. They pay more attention to the rearing of trees than in any other islands of Polynesia, for the cocoa-nut trees are fenced round, and pounded pumice is mixed with the soil near their roots. This stone is collected by the women, who are frequently to be seen in numbers on the beaches, after westerly winds, picking it up in small baskets.

There is likewise a purslane, which is abundant, and according to Kirby, is eaten in cases of scarcity or famine. The excavations for the planting of taro are of various sizes, generally one hundred feet in length, by fifty in breadth. On Makin or Pitt's Island, it is said, there is a trench about ten feet wide, and not less than seven miles long, dug around the lagoon, from which it is separated by an embankment. The water in this trench is but slightly brackish, and sufficiently fresh to nurture the taro. The natives are remarkably careful to keep this plant free from weeds, or any thing that may affect its growth; and they are in the habit of loosening the root, with this view. There is no particular season when it comes to maturity, neither do they observe any particular time for planting it. On Makin, they have a kind of fruit resembling the gooseberry, called by the natives "teiparu;" this they pound, after it is dried, and make with molasses into cakes, which are sweet and pleasant to the taste.

Of all the native accounts of the peopling of the groups of the islands in the vast Pacific, that of the Kingsmill Group bears the strongest impress of truth and historical probability. Whether this be owing to the comparatively recent period at which they have been peopled, or to their traditions having been less confused by mythological tales, it is difficult to determine; but the facts appear so remarkable and probable, that few will read the account of them without giving it the full weight of authentic history. This account states, that the first inhabi-

tants arrived in two canoes from Barness or Baneba, an island which they say lies to the southwestward, and whence they had escaped during a civil war, as the only means left them of preserving their lives. After they had arrived upon this island and had begun a settlement, two other canoes happened to arrive from an island to the southeastward, which they called Amoi. The natives in the last canoes were lighter in colour, and better-looking than their predecessors, and spoke a different language. For one or two generations the two races lived together in harmony; but the Baneba people coveting the wives of the men from Amoi, difficulties arose, which ended in the Amoi men being put to death by those of Baneba, and the latter taking possession of the women.

From these sources all the Kingsmill natives are descended. The bread-fruit is said to have been brought by the Amoi people, and the taro by those of Baneba. The cocoa-nut and pandanus were found growing on the island.

It is difficult to settle the position of Amoi, from its name; but the direction in which it lies would designate the Samoan Group as the islands referred to. Those of Baneba, it is suggested, might be derived from the Caroline Group, although the direction does not exactly correspond. The Ascension Island of that group has Boneba for its native name.

What adds to the probability of this simple story, is the fact that it is almost the only tradition these islanders have. That the islands have been peopled within a period not very remote, is believed by the natives themselves, and they state that only a few generations back the people were much fewer than at present, wars less frequent, and the communication between the islands safe and free. The grandfather of Tekere, the present king of Kuria, is said to have voyaged to every island in the group on a pleasure trip to see the world, about a hundred years since. But, so estranged have the inhabitants of the several islands become from each other, that if a canoe from one of them should visit, or seek, through distress, another island, the persons in it would in all probability be put to death, under the supposition of their being spies, or in order to procure their bones and teeth for the manufacture of ornaments.

The islanders of this group differ in their personal traits from those of Polynesians, and more nearly resemble the Malays. Their colour is a dark copper, a shade or two deeper than the Tahitian; they are of the middle size, well made, and slender. Their hair is fine, black, and glossy; the nose slightly aquiline, but a little broad at the base; the mouth is large, with full lips and small teeth; the cheek bones pro-

ject forward, so as to give the eyes the appearance of being sunken; their beards and mustaches are black and fine like their hair. Their average height is about five feet eight inches, and the great majority would be called small men. The women are much smaller in proportion than the men, with delicate features, slight figures, and, as before remarked, they were generally thought pretty.

In this description, it will be necessary to remark, that the inhabitants of Makin are not included; for they differ so much in point of appearance from the others, that were it not for their manners, customs, and language, they could not be classed among the same race. A drawing of one is represented in the annexed engraving.

INHABITANT OF MAKIN.

Wood, who had lived among the latter people a long time, accounted for their difference in appearance by their being at all times abundantly supplied with food, and living an inactive life, with nothing to disturb their peace, which has continued unbroken for upwards of a century. They have from this cause become naturally indolent; and their fullest enjoyment is in taking their ease. Their colour is a shade lighter than that of the natives of the other islands of this group; their stature taller, and their whole frame much larger; their limbs are full and well rounded; their bodies as smooth as a child's; their features oval, and more regular and delicate than those of the natives of the southern islands of the same group.

As respects their social state, the people are divided into three classes: the nea or omata (chiefs), katoka (landholders), and kawa (slaves). The first and last divisions constitute about three-fourths of the population, and are about equal in numbers. The katokas are

persons who possess land, but are not of noble birth; many of these were originally slaves, who have obtained land by acts of bravery, or through the favour of their chiefs. The kawas are those who possess no land, or no one from whom they can claim support. The omatas consist of all the free and well born, who possess the greater proportion of the land, as well as the political authority of the group. The oldest male of a family is the chief of the community, and presides over all their matters: he is called nea. They are, however, independent of each other, although great deference is always paid to the oldest among them.

In Makin, the class of katokas is not known; and the only distinctions they have, are the high and the low. This class, therefore, appears to have been only introduced on Kuria and the adjacent islands.

Wars between the different towns are of frequent occurrence; and in some of the islands ambitious chiefs have obtained the rule through conquests, and made themselves sovereign over the whole.

There does not appear to be any general authority existing throughout the group, even in those islands that are in the neighbourhood of each other, excepting in the islands of Apamama, Nanouki, and Kuria, where there is a king, who governs the three: he resides on the former, and is named "Tetalau." His grandfather was the first to make war, and by conquest acquired supreme power in Apamama. The present king has extended his authority over the two smaller islands, against which he waged a successful war, in consequence of the murder of one of his relations. To this little kingdom, most of the facts in reference to the Kingsmill Group more particularly apply, as Kuria was the residence of Kirby; but from the observations of the naturalists and officers, I have little doubt that the manners and customs of the other islands, with the exception of Makin, are very similar.

On Tarawa there is also a king, as well as on Makin; but it appears that this has only been the case on the latter since the time of the grandfather of the present king, called Teouki. The acquisition of royal power by him was said to have been effected only through a series of bloody wars, which established his authority so firmly, that peace and quietness have reigned for a century; nor has any attempt been made on the part of the conquered chiefs to regain their independence.

The government is carried on after the simplest patriarchal form, the king contenting himself with receiving the tribute due him, without intermeddling with the administration of the affairs of the separate towns over which he rules.

According to Kirby, a king governs also on Taputeouea or Drummond's Island; but it has been seen by the experience of the Peacock that his power was far from being paramount, it having been contested by a large portion of the island.

There are places where the royal authority does not supersede all other, and where the government is carried on by the whole body of chiefs, who take rank according to their age. In these places, for the purpose of accommodating all, there is in every town a large council-house, called the mariapa, one of which has been before described. In it every family of rank has its particular seat, along the side of the house; the middle being occupied by the katokas and kawas, or landholders and slaves, neither of whom have any voice in the affairs of government.

When a meeting is deemed necessary, the oldest or presiding chief sends out his messengers, whose business it is to summon the people, which is done by blowing conchs in all directions. The council then assembles, when the head chief lays before them the business, and any one is at liberty to speak, and if he be so disposed, delivers his opinion. The discussions are said to be at times very animated, and violent quarrels sometimes take place between different speakers, who are with difficulty prevented from coming to blows by those who are present. No regular vote is taken; but the opinion of the majority is very soon ascertained, and this decides the business.

The chiefs have absolute rule over their own families and slaves, and can punish them at pleasure. Minor crimes are punished by the offended party or his relatives, but in cases of importance, the decision is made and the punishment ordered in council.

The great and marked distinction between these natives and those of Polynesia is the absence of the taboo system, or any laws or prohibitions under the control of the priest, or chiefs, that are believed to emanate from their gods. Mr. Hale remarks, that the word taboo occurs in several compounds in their language having the meaning of sacred, but is not used by itself.

The succession to rank and property is hereditary. If a chief has several children by different wives, the son of the mother of the highest rank is the successor. If all the children should be equal in rank, the eldest would receive twice as much land as the others; or if the father does not choose to divide his property, the eldest son would receive the whole, and is obliged to support his brothers and sisters, who are expected in return to work for him, and cannot marry without his consent. Females can inherit property, and their are heiresses in the Kingsmill Group whose wealth allures many suitors. Slaves are held under strict

subjection, are considered as personal property, and cannot marry without the consent of their masters.

The religious belief is of the simplest kind. The name of their principal divinity is Wanigain, or Tabu-eriki. He is their most popular god, and considered by some the greatest. About two-thirds of the people worship him as their tutelar divinity. The rest do not acknowledge him, but have other deities; and some worship the souls of their departed ancestors, or certain birds, fish, and animals. A female deity is the object of adoration to very many. She is called Itivini, is reputed to be of a cruel disposition, and all the little children who die are supposed to be killed and eaten by her. The natives always refuse to eat the animals, fish, &c., worshipped by them, but will readily catch them, that others may partake of the food.

Tabu-eriki's image has been before described, and a wood-cut representing it will be found at the end of the chapter. The coral stone which represents him is always tied round with cocoanut-leaves, and these are changed once a month, to keep them constantly green. The worship paid to this god consists in repeating prayers before this stone, and depositing beside it a portion of the food prepared for their own use. This is done not only at the time of festivals, but at their daily meals, and also whenever they desire to propitiate his favour; the first fruits of the season are also offered to this god. Every family of any distinction has one of these stones, which is considered by many of them rather in the light of an altar than of an idol.

The female deity, Itivini, is worshipped in a small circle, formed by a number of coral stones, three feet in diameter, which is covered with white gravel; in the centre a cocoa-nut is set up. At the time prayers are offered to her, this nut is bound with a wreath of leaves, and anointed with cocoanut-oil.

There is another female deity, called Itituapea, who is worshipped at a flat coral stone situated on the reef between the islets of Kuria and Oneoka; the two are known on the chart by the name of Kuria. Any one passing it, either on foot or in canoes, never fails to invoke her favour, and if they have any food, leave a part of it on the stone, which is never taken away.

The skulls of ancestors are carefully preserved by their family, and held in great reverence. When they desire to invoke their spirits, these skulls are taken down, wreathed with leaves, laid on a new mat, anointed with oil, and presented with food. Fish and animals that are held sacred are only addressed with prayers by their worshippers.

According to Wood, the names of Tabu-eriki, Itivini, and Itituapea are unknown at Makin, and the only spirits the natives of that island

worship are those of their deceased ancestors. The custom on the death of a great chief is to set up a similar stone and deck it with cocoanut-leaves, after which such offerings as have been mentioned are made to it. Kirby thought, from what he had seen, that the natives of Kuria believed that their gods also had once been chiefs, who from the lapse of time had been forgotten. For the performance of these duties there are priests, but they do not enjoy any particular respect or power on that account. The priests are called iboya or boya, and are not a distinct class: any young man of high rank and possessed of shrewdness may become a priest. Every family of consequence has a priest to attend to its tutelar deity, who performs the rites and ceremonies. The perquisites of priests consists only in the food offered to the god, which the former takes away after it has remained a short time, and eats it at his own house. In the absence of the priest, the father of the family officiates by offering up family prayers, and the food is removed and eaten by some elderly person belonging to the household. Prayers are offered up either in a sitting or standing posture, and are accompanied by no particular ceremony or gesticulations. The prayers are usually petitions for health, long life, success in war, fishing, the arrival of ships, and other blessings they may desire at the moment, and which it is believed to be in the power of the gods to give them.

The priest makes known the oracles of the gods, which he receives in the following manner. On the sandy beach on the weather or eastern side of the island, there are many houses, called ba-ni-mota, or bota-ni-anti. These are of the usual size of the dwelling-houses, but the walls are of coral stone, and they have no loft. The doorway is always in the west end, because the Kainakaki, the country of souls, lies in that direction. In the centre of this house, a stout pillar of coral stone is built up to the height of three and a half feet, having in its middle a hollow of about a foot in diameter; to this the priest puts his ear, and pretends to receive the instructions of his god.

On Kuria there are six of these houses, and besides there are many hollow pillars standing uncovered along the beach, as it is not deemed necessary that the oracle should always have a covering.

On Makin there is no regular order of priests, and the father of the family, as in the case of the absence of the priest on the other islands, officiates. On this island they have a class of men, which are unknown to the others, conjurors, and persons who pretend to have intercourse with spirits.

The natives of the group put great faith in omens and charms. The most common mode of divination they call kaina, which is performed

with the sprout or top of a young cocoa-nut tree. The leaves of this are doubled in after a particular fashion, and according as the folds coincide or not it is deemed a good or a bad omen. When these folds do not coincide, they believe that one of their gods is probably offended, and proceed to find out whether he be so or not, by taking a cocoa-nut that is kept for the purpose, which they spin like a top before the sacred stone or altar: if it falls with the upper end towards the stone, it is a favourable omen; if otherwise, the god is angry, and must be appeased by offerings and prayers.

At times they pretend to receive an intimation that their ancestors are displeased, in which case their skulls are taken down and propitiated by offerings.

They believe also in a species of cursing, called wainak, which consists in invoking or praying to Death, in order to procure illness or the displeasure of the gods on any one.

Shooting stars are deemed ominous of death to some member of the family, which may occupy the part of the council-house nearest the point of the heavens from which it took its flight. If accompanied by a train, it foretells the death of a female; if otherwise, that of a male.

Some of the chiefs are believed to hold communication with spirits, and to be able at times to foretell future events: they usually exercise this pretended power at night; and when a number of people are sleeping in the mariapa, they are awakened by unnatural sounds, proceeding from the chief, which are considered as the words of the god, who speaks by him to announce the arrival of ships, the approach of war, and other great events. When these predictions do not come to pass, they always impute the failure to the intervention of some other spirit.

They believe in an existence after death, and that on the death of a person, his spirit ascends into the air, where it is carried about by the winds, wherever they may chance to blow, until it finally reaches the Kainakaki elysium. Only those who are tattooed can expect to reach it, and these are generally persons of rank; all others are intercepted on their way, and doomed by a large giantess, called Baine. If those who die are old and feeble, their spirits are conducted to the Kainakaki by the shades of those who have died before them. The spirits of children are carried to the realms of bliss by their female relatives, and are nursed and taken care of until they are able to provide for themselves.

The Kainakaki is supposed to be situated in the island of Tavaira, or Gilbert's Island. On this island there are several curious mounds,

of different sizes, the largest of which is about a mile long by half a mile wide; some of them exceed twenty-four feet in height above the surrounding soil: with this altitude, these are very conspicuous on a low coral island. Each of these mounds is supposed to be the place for a Kainakaki, the great beauty of which is invisible to mortal eyes. Here the spirits pass their time in feasting and dancing; and whatever they delighted in on earth, is now enjoyed to the fullest extent. The ground of the Kainakaki is considered sacred, and though overgrown with trees, no native will venture to cut them down: when a tree falls, it is taken away, and another planted in its place.

The daily occupation of these natives will serve to give an estimate of their character, and would seem to be necessary before speaking of their customs.

They rise at daylight, wash their face, hands, and teeth, with fresh water, and afterwards anoint themselves with scented cocoanut-oil. They then proceed to their work, and continue at it until the heat becomes oppressive, which it does by nine or ten o'clock, when they return to their houses, wash themselves again, and take their first meal: all the middle of the day is passed in their houses, or in the mariapa, in sleeping, or chatting with their neighbours. About four o'clock in the afternoon they again resume their work, and continue engaged at it until sunset, when they return, and wash themselves for the third time. They then take their second meal, and shortly after dark retire to sleep. They have no torches, (except for great occasions,) or any other means of lighting their houses, and are thus compelled to retire early, so that their amusements, as well as their occupations, cease with the day. The character of these islanders has many things in it to condemn: although they are deceitful and dishonest in their dealings, yet they are, in their intercourse with each other, hospitable and generous; they never buy or sell, but if any person desires an article which another has, he asks for it, and if not too valuable and esteemed, is seldom refused: it is the general understanding that such favours are to be returned, and that the request should only be made by persons who can afford to do so. They always place food before a stranger, and any one who has not a sufficient supply at home is at liberty to join the meals of a more fortunate neighbour. According to Kirby, there are many who are desirous of avoiding this tax upon them, and take their meals after dark, when they are not so liable to be intruded upon by their hungry fellow-townsmen.

They are addicted to thieving, although they are severely punished for it when detected. They are easily excited to anger, but are soon

appeased, nor is the occasion of offence remembered with any feelings of rancour. The women seem to possess stronger passions than the men, and more enduring wrath; jealousy is the principal exciting cause with them, and they will sometimes carry a small weapon, made of a shark's tooth, concealed for months, watching an opportunity of making an attack; desperate fights are the consequence of this, and so much injury is done before these ferocious combatants can be parted, that they often suffer from terrible wounds. Yet Kirby says, he found in other respects than this the women always more humane and gentle than the men.

Like all savages, they are treacherous and cruel to the last degree; although they seem less prone to fighting than other natives whom we had met during our cruise. Kirby mentioned, that they had had no war on the three islands where he was resident, for upwards of five years. This may be partly owing to the difficulty of fitting out expeditions to attack the other islands, and the hazard of communicating with those islands of which they have a knowledge.

Another custom is remarkable: when a fisherman arrives with a well-loaded canoe, his neighbours assemble around him, selecting and taking away such as they please, leaving the owner nothing in return but the satisfaction of knowing, that on a similar occasion he has a like privilege to help himself. Custom has so far sanctioned this habit of appropriating things belonging to another, that, according to Kirby, they have no term to designate a poor man, except that of slave. Any one who owns land can always call upon others to provide him with a house, canoe, and the necessaries of life; but one who has none is considered as a slave, and can hold no property whatever.

The courtesies of life with them are few, and the want of them probably arises from their privilege of making use of what belongs to another as their own. Their salutations on meeting are confined to simple inquiries, "Where are you going?" or, "Whence do you come?" The rubbing of noses is only practised on special occasions. On meeting a chief, the other natives leave the path and stand aside until he passes, but make no gestures or expression of obeisance. This same mark of respect is also rendered to all the women by the other sex.

They are said to be kind and affectionate to their children, and to indulge them in every thing; they never punish them even for the most insolent and passionate behaviour, only using kind and affectionate words: this may account for the rude treatment that was observed to be in practice among the natives of Drummond's Island towards our gentlemen as well as their conduct towards each other. There is, how-

ever, no want of attention to the aged who are not able to provide for themselves; and those who neglect their old relations are held in little respect. The aged enjoy much consideration, and, as I have before stated, great respect is paid to them in council.

More consideration is awarded to the female sex than has been observed in any of the other groups. All the hard labour is performed by the men, whose employment consists in building the houses and canoes, catching fish, collecting and bringing home the produce of their plantations, and attending to the cultivation of the taro, in which the women assist only by weeding the ground. The employment of the females is almost exclusively confined to in-door occupations, and those which we ourselves hold as belonging naturally to the sex, such as cooking and preparing food, braiding mats, &c., and they seem to have exclusive control over the house. The work of both sexes is, however, very light, and the greater proportion of their time is spent in pastimes, of which idleness forms the most considerable part. Although the women are relieved from the toils of life, yet they are not held to be above chastisement, and a man will not hesitate to strike a woman; but the fair ones consider themselves equally free, and seldom fail to return the blow, and the aggrieved party generally receives the aid of her companions, when the man is glad to escape from the bruises, blows, and scratches they inflict.

Among this people chastity is not regarded as a virtue, nor considered as any recommendation in the selection of a wife; but after marriage, a woman must be extremely guarded in her conduct, as the punishment for a want of duty in this respect is severe, even amounting to death in some cases; but it is usually limited to expulsion from her husband's house. Notwithstanding these penalties, there are frequent infractions of these ties, and it is not surprising that they should occur, under their system of polygamy, and the interdiction which prevents the younger brothers of chiefs, and persons who do not hold land, from marrying. Intrigues and elopements are not unfrequent, and produce the same results as elsewhere.

War, on all the islands with the exception of Makin, is a part of their business, and apparently engages most of their attention. Their conflicts may be considered as civil wars, for little communication is held between any of the islands, except those of Apamama, Nanouki, and Kuria, which are under the king of Apamama. The communication that takes place between the others is in consequence of the escape of individuals from punishment, or who become desperate, and embark in a canoe, to seek an asylum in some of the neighbouring islands. This is also the practice with the remaining portion of a defeated party, ir

order to escape from the pursuit of the victors. An instance of this kind was related by Kirby, that occurred about ten years before his arrival. While the king of Apamama was on a visit to Kuria, one of the principal chiefs in Apamama rebelled against him, gained over many of his subjects, and obtained full possession of the island; numbers, however, remained faithful, and fled to Kuria to join the king, who immediately began to collect his warriors from the two smaller islands, and prepared himself for making a descent upon Apamama. It was winter before he was fully ready, and owing to the irregularity and uncertainty of the winds and weather at that season, he was obliged to postpone his expedition for several months. He finally embarked, with his whole army, and landed upon the north end of Apamama, where a great number flocked to his standard. The rebels, finding themselves too weak to maintain a contest, fled towards the south end of the island. Here they prepared their canoes, and when the king, with his army, drew near, they took their wives and children, and put to sea. They proceeded first to Kuria, where they were mistaken, as they approached, for the warriors of the island returning; and the old men, women, and children, crowded to the shore to meet them, and welcome their relatives back; but they were suddenly surrounded by their enemies, maddened by defeat, who destroyed them all without mercy, and laid waste the whole island. In a few days afterwards the Kurians were seen returning, when the rebels again took refuge in flight, leaving the island to be again possessed by its owners, but with every thing destroyed. Some of the fugitives reached other islands in safety, others were picked up by whale-ships, but the greater part were never heard of again. The chief reached Taputeouea, or Drummond's Island, where he is said to be still living.

Wood also relates, that about eight years prior to his being taken on board, a fleet of canoes, containing fifteen hundred persons, arrived at Makin, from Apia, whence they had been driven by the warriors of Tarawa. At Makin they were hospitably received and entertained, until it was discovered that a plot was concocting among them for conquering the island, upon which the inhabitants fell upon them, and massacred nearly the whole.

They sometimes, though but seldom, engage in other warlike undertakings, when the warriors of one island will set out with a large fleet to attack another. In these expeditions they rarely go to any island to windward of them, on account of the uncertainty of the voyage when the southeast wind blows, and also in consequence of the sea-sickness produced by the motion of their canoes, which renders them unfit to fight. When this happens, their adversaries, if they get information of

the meditated attack, before, or just as the hostile fleet touches their shore, assail their invaders to great advantage, while the men, stiff from being cramped in their canoes, and still under the effects of their sickness, are easily overcome.

It is only the young and vigorous who go on these expeditions, with a few of the older warriors to direct their operations. In their civil wars the old men and the women join in the combat, and the victors make no distinction of age or sex in the massacre which generally ensues.

The bodies of the slain are not generally eaten, but, according to their own account, it occasionally happens that when some noted warrior has been killed, the young men eat portions of his flesh from hatred, and through a desire to appear fierce and terrible. Kirby stated two cases in which he knew human flesh to have been eaten. One was that of an old man of Kuria, who had offended a chief on Apamama, and the other, of four slaves of the king, who had attempted to escape from the island in a canoe. All these were killed, and particular parts of their bodies eaten. The act, it was thought, was prompted by vindictiveness, and a desire to taste an unusual kind of food. We may therefore conclude that they are not to be considered as cannibals, though, according to Kirby, they seem to have no apparent disgust at eating human flesh.

In Makin, where they have had no wars for a hundred years, they are much less bloodthirsty, and during the seven years Wood was on the island, only one man was put to death. He does not believe that the people are cannibals, but he has frequently heard the old men relate, that during times of scarcity their ancestors sometimes ate human flesh.

The weapons used among them are spears, clubs, and swords, which are made of cocoanut-wood, and after the simplest fashion. Few of their clubs are carved, and they seem to bestow very little labour upon them; this, however, is appropriated to a different kind of weapon, which they consider much more effective: these are the shark's-teeth spears and swords, wood-cuts of which have been heretofore given. The natives of most of the islands show the effects of these weapons on their bodies and limbs. The armour they use as a protection also claims much of their attention. According to Kirby, this armour has been only a short time introduced or in use on the islands, and is not yet common in all of them. As defences, they seldom resort to strongholds,—indeed they have none in the northern islands; but at Taputeouea they have palisades or pickets, about eight or ten feet high, which surround the towns. Utiroa had a protection

of this kind, and many pickets across the town in various directions, which would make a good defence, if the warriors were resolute. It is not improbable, that the more warlike natives of the southern islands, particularly those of Drummond's Island, will, ere long, push their conquests to the northern islands, and extend their rule over them. Two years before the arrival of the Peacock, the natives of Apamama, Nanouki, and Kuria, apprehended an attack from this quarter; when the king collected his forces to the number of between five and six thousand, who continued under arms through the whole summer; but after all it proved a false alarm.

Their houses and canoes are better built than any we found else where in the Pacific, and all their structures are large. strong, and durable, though constructed of the most unsuitable materials: they are so well combined as to display much elegance as well as strength. Their dwelling-houses and mariapas have been noticed, but there is another description of house, without a loft, in which the chiefs pass most of their time, receiving visits, and conversing with their friends and dependants.

On the island of Makin the houses are of larger dimensions, in consequence of the abundance of timber. From Wood's description of their mariapa, it is an enormous structure. The canoes have already claimed a notice: those built in the northern islands are much the largest, some of them being sixty feet in length.

From the importance of their structures or buildings, the trade of a carpenter is held in great repute: those who exercise it are either dependent on the chiefs, working by their orders, or free born: the latter are paid for their services. The time required for building a house is about two months, and the price of such a job, two or three rolls of their bread, called "kabul." A canoe capable of carrying ten persons takes five or six months to build. The payment is proportioned to the length of time occupied in the work. The whole town is engaged in the labour of constructing one of their mariapas. A very great proportion of their time is taken up in the manufacture of their dresses; and while the men are engaged in building houses and canoes, the women fabricate the articles of dress, sails, mats for flooring, and those worn by the men. The mats are made of the leaves of the pandanus, slit into strips about a quarter of an inch wide, and woven by hand: these are of two colours, light yellow and dark brown; the former are made from the young leaves, and the latter from the old, which are prepared by beating them with a mallet to render them pliable. On the yellow mats they bestow a great deal more of their attention: the young leaves are laid aside for two or three days after they are

plucked, till they are withered; they are then roasted, by holding them in the hand over the fire, and afterwards laid in the sun for three or four days, to insure them being sufficiently dried. During the latter part of the process, they are brought every evening into the house, to protect them from the dew or rain. When the leaves are sufficiently dry, they are left all night to bleach in the dew; they are then rolled up in balls, and pounded with a mallet to render them soft and pliable, and when this is accomplished, they are slit with a shell and are ready for use. The brown and white slips are braided together, so as to form regular figures, square or diamond-shape, which have a pretty effect. The colours being in the material itself, are retained as long as the fabric lasts. The mode of weaving this matting has been described. The conical cap of the men is at times quite becoming. They cover their shoulders with a small oblong mat, having a slit in the middle through which the head is passed. This part of their dress resembles a "poncho" of small size. The women's dress, which they call "iriri," is quite becoming and graceful: it is a kind of fringe, made of cocoanut-leaves, cut into slips about a foot long, and tied by one end to a string, which goes round the middle: the young leaflets are selected for this purpose, and the rib of the leaf is removed by slitting it down on each side. The leaves are next rolled up and beaten with a mallet, after which they are chewed until they become quite flexible; these narrow ribands are then knotted to a double cord. The dress is fitted on the person, and is then clipped off at equal lengths all around: it has a light and elegant appearance, and yields to any motion of the body, yet never becomes entangled or out of order.

At Apamama, they dip the iriris in cocoanut-oil; at Taputeouea, they steep them in an infusion of the juice which is obtained from a small tree, with large green leaves, called meo: of these leaves a number are pounded in a shell, and a little water poured on them, which is then filtered through the pellicle of the cocoa-nut tree and mixed with molasses. After being steeped in this liquid for some time, the iriri is rolled up in a mat with some leaves of the meo and pandanus-nuts, and roasted in a native oven. By this process it acquires a soft and flexible appearance, and a peculiar odour, which our gentlemen thought was like that of a mixture of tobacco and molasses. Both of these qualities it retains until it is worn out.

The natives are very fond of ornamenting themselves: in the lobes of their ears they wear strings of small leaves of the mangrove, and the pith of a large species of Scævola, which is common in the low islands. This pith is cut into strips and put up into a long roll; a wreath of which surrounds the neck, and to which a white ovula-shell,

or a large whale's tooth, hangs suspended on their breast. This pith is thought by Mr. Rich, to be the same as that called Chinese paper, and obtained from the same plant. Long strings of beads or braided hair are worn round the body, at times a hundred fathoms in length, which serve to fasten the mat. The hair for this purpose is taken from the female slaves, and is braided into a string about the size of a packthread. The beads are manufactured by the old men who are beyond doing any other labour, and are of the size of a small button-mould; they are made of cocoa-nut and shell, and strung alternately black and white, being ground down to a uniform size and fitted together for the purpose.

The food of the natives consists principally of fish, from the whale to the sea-slug; shell-fish of every kind are also eaten.

Whales are represented to have been much more abundant formerly, when they at times got aground on some of the numerous shoals, and were killed by the natives with their spears. Even now a carcass occasionally drifts on shore, which affords an acceptable prize. Sharks are caught by enticing them alongside the canoe, with a bait, and enclosing them in a noose. The smaller fish are taken in traps, like eel-pots, made of withes: these the natives set on the bottom, and place pieces of coral on them to keep them there.

Great numbers of fish are also taken in weirs, or enclosures of stone, which are made in the extensive coral flats, that are left bare by every tide: into these the fish are driven at high water, by a number of natives, who surround the shoal; the weir is then closed, and left until the tide falls, when the fish are easily taken in scoop-nets. Large seines are often used in places where the bottom renders it practicable to draw them. Flying-fish are taken in the daytime, by trailing a hook, attached to a short line, from the stern of a canoe. At night they are caught in scoop-nets, as they fly towards a lighted torch, held in a part of the canoe. Crabs are also decoyed out of their holes at night, by torchlight, and captured.

Turtles are taken in the season on the beaches; and shell-fish, with the sea-slug or biche de mar, are obtained on the reefs by diving.

Their vegetable food consists of cocoa-nuts and pandanus, and a variety of the taro, with a small quantity of the bread-fruit. The preparation of these engages a great deal of their attention, and that of the pandanus-nut in particular. When prepared, it is called kabul and karapapa. The inner or edible portions of these nuts are sliced off, and baked in an oven for several hours, till they are quite hard; they are then taken out, laid on a clean mat, and pounded with a large pestle to the consistency of dough; this is spread out upon mats

into the form of sheets, about three feet long by eighteen inches wide, and a quarter of an inch thick; these sheets are again laid on mats in the sun to dry, and at night are rolled up, and put away in an oven to bake. This process is repeated for two days, by which time the plates become as hard and unyielding as a board, and are of a reddish brown colour. Those plates called kabul are put away in the loft of their houses, but are every few days brought out into the sun to insure their being kept dry. At the close of the season, they are reduced to a powder, not unlike fine sawdust. This is put up in rolls, from eight to ten feet long, and six to twelve inches in diameter, bound with leaves of the pandanus, and made so smooth and round that they look like pillars of brown stone: in this state the preparation is called karapapa, and will keep for years. This is the principal dependence of the natives in seasons of scarcity, and these rolls of karapapa are used as a circulating medium, in which wages and tributes to the chiefs are paid.

They make a kind of broth with karapapa and kamoimoi (molasses), which the natives drink in great quantities.

Tuea is another kind of kabul, but made of a better variety of pandanus: this is beaten out into thin sheets, resembling dark brown paper, or like our cloth, which is also rolled up and put away; before being eaten, it is soaked for several hours in the milk of the cocoa-nut, and is esteemed a dainty. The kabul is generally chewed, and softens in the mouth, the pulp being dissolved, while the large mass of woody fibre remains: it has a sweetish taste.

The bread-fruit is generally roasted on hot stones, but not covered with earth, as at the other islands. After it is cooked, it is crushed between the folds of a mat. It is the same variety that is found at the Samoan Islands, which strengthens the opinion that part of these natives came from that quarter.

The taro is baked hard, then grated with a shell, and mixed in a trough with kamoimoi, until it is of the consistency of thick paste, which is eaten with a spoon made of a human rib. They sometimes grate this taro to a powder, and dry it in the sun until it becomes like bread-dust. This powder is made up in short thick rolls, and covered with pandanus-leaves, in which state it will keep for months. They call it kabuibui. Before being eaten, it is soaked in water, and then baked in a small basket.

Manam is another preparation, of baked taro and cocoa-nut. These materials are grated fine, mixed together, and then made into balls as large as thirty-two pound shot. It is eaten with kamoimoi; and when

the whole is not consumed on the day it is made, it is baked, to preserve it from spoiling.

The karaca, or toddy, is procured from the spathe of the cocoanut tree, which is usually about four feet long, and two inches in diameter. From this spathe the fruit is produced; but in order to procure their favourite toddy, it is necessary to prevent nature from taking her course in bringing forth the fruit: they bind the spathe up tightly with sennit; the end is then sliced off, and a cocoanut-shell hung to the projecting part of the spathe, to catch the sap as it exudes. One tree will yield from two to six pints of karaca. When first obtained from the tree, it is like the young cocoanut-milk, and quite limpid; but after it stands for a few hours, it ferments and becomes acid. When the spathe ceases to drop, another piece is cut off, and every time it ceases to flow, it is treated in the same way, until the spathe is entirely gone. Another spathe is formed soon after above this, which is suffered to grow, and when large enough is treated in the same manner.

The karaca is either drunk fresh from the tree, or made into kamoi-moi, (the kind of molasses before spoken of,) by boiling it down in cocoanut-shells, set upon hot stones. It strongly resembles our molasses, both in look and taste. When this is mixed with water it is called karave, and is the usual drink at their feasts, when it is set out in large wooden bowls, from which it is dipped by cups, made of cocoanut-shells or of human skulls.

These islanders have no kind of intoxicating drink. The food of Makin is similar, although the names are somewhat different: they use kaka for karapapa; tagara for manam. Their mode of cooking differs from that of other islanders. A small round shallow hole is made, about two feet in diameter, and six inches deep, with a sufficient number of hard stones to line it. In this a fire is made, and the stones placed on it: when the stones are heated, they brush away the fire and ashes, and arrange them; the food is placed on them, over which mats are laid, and covered with earth; before closing the pit, they run a stick obliquely into the heap, and when the whole is completed, this stick is drawn out, and water is poured into the hole to create steam. Their messes require from one to four hours to cook. At times they bake their food by simply putting it upon the stones uncovered.

They do not appear to suffer from want of food, although it is what would be deemed of a coarse kind. During Kirby's stay, they had abundance, though he mentioned having heard of a famine which had

occurred a few years before, when it became necessary for the natives to have recourse to the purslane, which is not considered by them as very unpalatable food.

These people have, from the little time occupied in cultivating their vegetable productions, a great deal of leisure; consequently, as would naturally be expected, amusements are sought for, and occupy a great part of their time: their festivals and dances are even looked upon as claiming priority to their warlike expeditions, and for these great preparations are always made some days previously. Their greatest festivities take place at the time of full moon, or a few days after it, when the people of one town usually invite those of another, both men and women, to what may be termed a dancing and singing match. On the day appointed, the guests arrive in their canoes, and proceed to the mariapa, where they occupy that portion of it on the side whence they came; the townspeople seat themselves opposite to them. The food which the strangers bring with them is laid in the middle, and as much more is added to it by their hosts, all of which is shared out by the guests among themselves. The dancing now begins, the guests making the first display of their agility, and when they have finished, the people of the town follow. A warm rivalry is thus kept up till evening, when the dancing gives place to singing, each taking up the measure in his turn. This is kept up until midnight, when the townspeople retire, leaving their guests to sleep in the mariapa. These festivities last for three days, after which the visiters depart.

The men, during this period, clothe themselves in mats from the waist downwards. Some load the waist with heavy strings of beads; others adorn the neck with rows of shells, and sometimes with one or two large whale's teeth, while others again have small rows of the latter across the back. Almost all wear a great many human teeth on the arms and around the neck: these are taken from their slain enemies; for, after killing a man, the first object with them is to knock out his teeth, for the purpose of obtaining them for ornaments. Through the lobes of their ears they pass long strips of yellow leaves, which hang down on their shoulders. They also besmear the face and body with cocoanut-oil, and some daub each cheek with fine white sand, and blacken their eyebrows and beards with charcoal. The hair is oiled and combed out with a pointed stick, and stands out from the head, forming an ornament which they esteem as very becoming. The women wear their usual dress and a few ornaments, but about the decorations of their persons they are very attentive and scrupulous.

The dances resemble the evolutions of a company of soldiers: the two parties stand in rows, either facing each other, or back to back, or else both face inwards; their motions are confined to the body and arms; the legs, though not entirely at rest, seldom have much action; at times the arms are thrown out from the body, when they give a rapid quivering motion to the fingers, clap their hands together, and afterwards slap them with great force against the thighs and breast, while the body is rocked to and fro. Every movement is made in perfect unison by the whole party, who all keep time with a monotonous song. In their dances the great object is to make as much noise and commotion as possible. Their full-moon feasts are the only periodical ones they have.

At the marriage of a great chief there are great rejoicings, attended with dances and songs; the latter are composed for the occasion, reciting the greatness of the chief, and the prowess and character of his ancestors.

The regular monthly festival does not prevail at Makin Island.

On Taritari a great feast is held about midwinter, in honour of Teouki, the grandfather of the present king, who is considered by them as the most illustrious man the island has ever produced.

There are many other amusements: among them foot-ball, sailing small canoes, swimming in the surf, and flying kites. The kites are made of the pandanus-leaf reduced to half its thickness, which renders it lighter than paper; and they are prettily shaped. In swimming in the surf, they have a small board like that used by the Sandwich Islanders.

One of their sports differs from any we have seen, and appears to be peculiar to themselves. It is a game in which dancing, fencing, and singing, are combined, which produces a very animated and gay spectacle, from the numbers engaged in it, which are often from one to two hundred of both sexes. This sport takes place in an open space, by moonlight. Each young man chooses a partner from the other sex, and they arrange themselves in two rows, the partners facing each other as in our country-dances. Two couples form a set, and always remain together, but are continually changing places with the rest. Every one is provided with a light stick of the stalk of the cocoanut-leaf. At a given signal they begin their song, and the dancers strike their sticks together, as if playing at single-sticks, keeping time to the song; at stated points they change places with those next below, and each in turn reaches the head. As these changes all go on simultaneously, the song and clatter of sticks are kept up without interruption, and in excellent time. If a person misses a stroke, there is much

laughter, shouting, and joking. The clatter, noises, and singing may be heard for a great distance around.

The marriage ceremony of these people is conducted somewhat after our own custom. A wife is never bought, but it is generally supposed that each party will contribute something towards the household stock. When a young man is pleased with a girl, and his addresses meet with a favourable reception, he applies for the consent of her father; if this be refused, it sometimes puts an end to the affair; but it oftentimes happens that the young couple make a runaway match, and trust to a reconciliation afterwards, which usually is brought about.

It would be esteemed very indelicate for a young man to ask his future father-in-law what dowry his wife was to receive; this is never made known until after the wedding, and sometimes is delayed until the birth of the first child. If a separation take place, which frequently happens, the wife takes back the land and other property which she brought with her.

A few days previous to a marriage, it is formally announced to the relations and friends of both parties, who prepare mats, food, oil, and many other articles, for the festival; these are sent to the dwelling of the bride's father, where the ceremony is to take place. When the day arrives, all repair to the house, dressed and decorated in their gala suits. When thus assembled, the young couple are seated in the midst on a new mat; the priest presses their foreheads together, and pours on their heads a little cocoanut-oil; he then takes a branch of a tree, dips it in water, and sprinkles their faces, at the same time making a prayer for their future happiness and prosperity. Food is now placed on the mat between them, usually a particular kind of fish, with bread-fruit and taro, which they eat together. They are now considered as married, and the friends and relatives throng around them to offer their congratulations and rub noses. The feast then begins, and is continued till evening, when a fire is lighted in the open air, and dancing takes place. This festival is continued for several days; on the evening of the third day, the bridegroom takes his wife home.

For ten days after the marriage, the house in which the bride lives is screened with mats, and she does not go out of it, but remains at home to receive her friends. When the wife is eight months *enceinte* for the first time, the friends and relatives of the husband prepare provisions and mats; those of the wife, provisions also, with iriris and oil. These are all taken to an amata, a house without a loft, of which there are several in each town, for the convenience of such assemblies. The two parties sit on opposite sides of the house, with their property; two

men, one from each side, stand up in the middle, and proceed to exchange the mats for iriris and the oil; the provisions of one side for those of the other. The exchange is made with great care, so that each receives an equivalent. When this is finished, the parties gather up their exchanges and retire, leaving the married couple, whose presence was deemed necessary to sanction the sale, no better off than before. This custom is called katiro, and is often resorted to for making exchanges, on ordinary occasions.

Children are often betrothed at an early age, sometimes as soon as born, in which case the ceremony of marriage is not deemed necessary. Polygamy, as before observed, is allowed to any extent, and limited only by the ability of the person to support his wives. On Makin, no marriage ceremony takes place, for every female child is betrothed as soon as born, usually to some near relative, who takes her to his house at whatever age he may think proper; and those who are not so betrothed remain all their lives unmarried, forming temporary connexions with the young men who are similarly situated. Of the latter there are great numbers, owing to the majority of the women being monopolized by the wealthy and powerful, to whom this custom affords every facility for obtaining wives. This state of things brings about, as is naturally to be expected, many intrigues and squabbles.

At the birth of a child, the priest gives it a name, at the request of the father; but if the infant should be taken sick soon afterwards, the first name is abandoned, and another adopted, in hopes that it may prove a more fortunate one; for they believe that the illness may be owing to its name. It is very common to call a child after its grandfather.

A woman has seldom more than two, and never more than three living children. After the birth of a third, they consider it necessary to prevent the increase of their families, and resort to that most unnatural means, a systematic abortion. So soon as a woman believes herself to be *enceinte* for the third or fourth time, she determines that the offspring shall not survive, and calls in the aid of an experienced midwife to destroy it, who effects the purpose by external pressure on the abdomen or back, and though not unattended with much pain and difficulty to the mother, the operation rarely proves fatal. This practice is looked upon without any sort of horror or shame, being considered as a necessary and proper means to prevent their families from becoming so large as to be a burden to them, and not because the island might become over-peopled, for this latter idea does not seem ever to have occurred to them. The practice of destroying the fœtus is universal among the unmarried females, but children are never

destroyed after birth. According to Wood, this custom does not prevail at Makin.

There are professed tattooers, who are held in great estimation, and receive very high prices; this confines the art to the wealthy and those of rank. The young men are not tattooed before the age of twenty, and slaves never. The tattooing is mostly in short oblique lines, about the eighth of an inch apart. These are arranged in perpendicular rows, of which there are four or five down the back on each side of the spine, with a similar marking in front, beginning just below the collar-bone. The legs also are marked.

The women are tattooed in the same manner, but not so much as the men. Owing to the lightness of the lines, and the distance between them, they do not show very conspicuously. The colouring matter used is charcoal, mixed with cocoanut-oil. The instrument employed is a piece of bone, cut like a fine-toothed comb, similar to that used at the Samoan Group. The tattooing is done at different times, to alleviate the pain which attends the operation.

Of all their customs, the funeral ceremonies are the most remarkable. When a man dies, his body is taken to the mariapa, washed, and laid out on a clean mat, where it remains for eight days, and every day at noon it is taken into the sun, washed, and oiled. During this time the friends are engaged in wailing and singing praises of the dead, and dancing; but they think it a great weakness to shed tears on such occasions. After this mourning, the body is sewed up in two mats, and sometimes buried in the house of the nearest relatives, the head being always turned towards the east. In other cases, it is stored away in the loft. When the flesh is nearly gone, the skull is taken off, carefully cleaned, oiled, and put away. The skulls of their ancestors are kept by chiefs as a kind of household deity, to which they frequently offer up prayers and entreaties, to have a regard and to keep watchful care over their descendants. The skulls are not unfrequently taken down, bound around with wreaths, anointed with oil, and have food set before them. In passing from one island to another, these skulls are always carried along, as if members of the family, and treated with every mark of reverence.

The funeral ceremonies on Makin, according to Wood, are still more extraordinary; but we have no good reason to doubt the facts, as they seem to be somewhat allied to those above related. After the first ceremonies of wailing, the body is washed and laid out upon a new mat, which is spread on a large oblong plate, made of several tortoise-shells sewed together. From two to six persons, according to the size of the corpse, seat themselves opposite to one another on

the floor of the house, and hold this plate, with the body of their friend, on their knees. When tired, they are relieved by others, and in this way the service is kept up for a space of time varying from four months to two years, according to the rank of the deceased. All persons, whether freeborn or slaves, receive this treatment after death. During the continuance of this lying in state, a fire is kept constantly burning, both day and night, in the house, and its extinction would be regarded as a most unlucky omen.* At the end of the period, the remains are sometimes wrapped in mats, and stowed away in the loft of the house, but more commonly they are buried in a piece of ground set apart for the purpose. The grave is marked with three stones, one at the head, another at the foot, and one placed horizontally across these.

The skulls of the chiefs are preserved, and treated in the same way as at the other islands.

From diseases the natives appear to be tolerably free. Consumptions, and a kind of cholera morbus, are the most fatal. There were no cases of elephantiasis seen; but, as has been remarked in speaking of the islands separately, the kind of cutaneous disorder called by the natives gune, prevails extensively; this, at some stages of the disease, resembles the ringworm. It begins with this appearance, in a small circle, about an inch in diameter, covered with a scurf; the ring gradually increases in size, and when it becomes large, a smaller one forms within it; as this last increases, another forms within it, and in this way the affection continues to spread, unless arrested. Several circles often form on the body within a short distance of each other, the rings meet and become confluent, producing a variety of curved lines, and concentrical circles. The whole body becomes at length covered with this scurf, which is always attended by painful itching. This finally passes off, and leaves the skin seamed with an infinity of circles and wavy lines of a livid hue, and produces a most disgusting appearance; in this stage it sometimes continues during the remainder of a person's life, without materially affecting his general health. At other times it assumes a more virulent character, in which case large excrescences like warts form, first on the face, or between the fingers and toes, and then in other parts. The softer portions of the face and body swell to double their natural size; the person becomes unable to walk, or to move his limbs, until death at length overtakes and releases

* When the truth of this account was questioned, in consequence of the time that would be employed by the natives, Wood readily answered, that "One half of them have nothing else to do."

him from his sufferings. The natives call this disease sometimes gune-maior, or the southwest gune, from the fact that it was introduced into their islands from that direction: and as the Peacock found it prevailing extensively at the Depeyster Islands, it is but reasonable to suppose that it came from that quarter. It was most prevalent at Taputeouea, the most southern of the Kingsmill Islands, and gradually becomes less so in the northern islands; Wood asserts that he has never seen a single case of it at Makin.

The climate of these islands is equable, and though of high temperature, it is found to be less oppressive than in most tropical countries. For the most part constant breezes prevail, and frequent rain falls, which moderates the great heat, and at the same time confers fertility on the soil. From October to April, the time of the Peacock's visit, is the winter, and is especially distinguished by the frequency of rains. Variable winds from the northward and westward prevail at this season, and they have violent gales from the southwest; these, according to Kirby, are typhoon-like. The natives plant stakes to prop up their houses, and tie them down, to prevent them from being blown away. These storms last for three or four days, veering gradually round to the north. The leeward sides of the islands receive most damage, and both land and trees are swept away. Kirby states, that the lee side of Kuria has worn away during his residence. In these gales the trunks of large trees are thrown on the west side of the island, together with large lumps of resin, similar to that found in the soil at New Zealand, which the natives use to scent their oils with: these trees, sometimes two feet in diameter, were thought to be of the pine species; many stones are found in their roots, from eight to ten inches in diameter; these are a fine basalt, and the natives use them for various purposes.

From May till September the weather is fine, with clear skies, and only occasional showers; and during this time the wind blows constantly from the eastward. This is the season in which the natives make their voyages; they never venture abroad in the winter months, even from island to island, being well aware of the danger of so doing.

Earthquakes are occasionally experienced in these islands. Kirby says he has felt ten or twelve sufficiently severe to shake down a house: the natives exhibit no fear on account of them. The direction of the oscillations seems to be from the southwest.

The population of the group, from the best data which was obtained, is about sixty thousand souls. At Drummond's Island, where there was the best opportunity of a personal examination, the estimates were above ten thousand: this is considered the most populous island

of the whole group. On Apamama, Kirby saw collected from six to seven thousand warriors, belonging to it, Nanouki, and Kuria: the joint population of these three islands may therefore be reckoned at twenty-eight thousand; it would seem reasonable to estimate the remaining twelve islands, which have been observed to be thickly inhabited, at the same number.* This apparently would give from four to five hundred inhabitants to the square mile; for, if only the dry land were to be taken into the account, there would not be more than one hundred and fifty square miles; but to this should be added the lagoons and sea around, from which in reality these natives derive the greatest part of their sustenance: this would increase the area to upwards of five hundred square miles, giving one hundred and twenty inhabitants to the square mile for support.

These islanders have had but very little communication with strangers; and although they have occasionally been visited for the last forty years, but little change has been brought about by the intercourse. There is nothing to induce the visits of vessels, for little is to be had in the way of refreshment: neither wood nor water is procurable in any quantity, and there is nothing for a profitable exchange. Of course, therefore, only a few vessels anchor in their harbours; of which, as has been pointed out, they have many good ones, an advantage not possessed by other low coral islands.

The articles of trade being but few and trifling, only a very small amount of the manufactures of civilized nations have found their way into these islands. The southern islands have been most visited, in consequence of their lying more in the immediate neighbourhood of the whaling-ground; the consequence has been that they have been able to obtain enough iron implements to have almost superseded those of native construction. The people of the southern islands have also imbibed an extraordinary fondness for tobacco; and these, with some diseases, may be said to constitute their acquisitions from the whites, to whose depraved appetites they at an early day learned to administer.

The same causes that prevent them from being the resort of vessels also deter sailors from deserting; and, as has been seen, both Kirby and Wood had become disgusted with the lives they led, and were glad to make their escape. From Kirby's account, there were only five more white men, and one black, on the islands. An Englishman and an American reside on Nukunau, (Byron's Island,) the former of whom had become a high chief, and acquired much influence; but it is believed, from his being of a bad character, that the intercourse

* Wood estimates that of Makin at five thousand.

with him has not operated favourably on the natives. The other four are on Peru Island.

In the dispositions of these natives there are some peculiarities: they are said to be subject to despondency and sullenness, that sometimes causes them to commit suicide. Kirby mentioned five instances on Kuria, of both men and women destroying themselves, and of several others who had attempted it, but were prevented by their friends. To terminate their lives they always resort to hanging on a tree. The motive to this act is generally the treatment they have received, or offence taken at the conduct of some person, whom affection or fear renders them unwilling to injure; the mortification and grief produced thereby leads them at last to suicide, which is considered by them as a remedy for their evils, as well as a severe revenge upon those who had ill-treated them.

What constitutes the highest ambition among them, is to be considered accomplished men of the world. They have a word in their language (mauda), which expresses one thoroughly instructed in all their arts, a good dancer, an able warrior, versed in all their knowledge and sports, who has mixed in life, enjoyed its highest excitements and delights, both at home and abroad. Such a man in their estimation is the most exalted in character, and is fully qualified on dying to enter at once upon the enjoyments of Elysium.

There is a striking contrast between the Pitt Islanders and those of the rest of the group; and if they were originally the same people, which there does not seem to be any reason to doubt, it shows what a great alteration may be effected in the physical race, in the course of two or three generations, by the enjoyment of peace and plenty; for while the one retains still all the savage and cruel propensities, the other has become mild and humane,—proving that a life free from wars, and all their harrassing and distressing tendencies, even among savages, brings with it the practice of virtue.

On completing the survey of the Kingsmill Group, Captain Hudson found it necessary to place his crew, and that of the tender, upon a reduced allowance of provisions and water. He then steered away to the northward, through the Mulgrave Islands; and on the morning of the 3d of May, they made Pedder Island of Arrowsmith. The vessels passed along its west side, and through the Fordyce Passage, between it and Arrowsmith's Island. Daniel Island was also seen from aloft to the eastward. These islands are all of coral formation, with lagoons, and are inhabited. The southeast end of Arrowsmith's Island was found to be in latitude 7° 05′ N., longitude 171° 23′ 54″ E. It is twenty miles long.

On the 5th, they made the Pescadores, which was surveyed. Its position is in latitude 11° 23′ 15″ N., longitude 167° 36′ 30″ E. The Pescadores is of triangular shape and coral formation; it has on its reef several islets and some sand-spits: the former are covered with a few low bushes, but it has no cocoa-nuts or pandanus-trees, and affords nothing but the pearl-oyster and turtles, in the season. The whole island is about thirty-two miles in circumference. Its greatest length, north and south, is ten miles, and the same between its east and west point. There are two entrances in the lagoon: one about the middle of the north side, the other on the east side. The island has no inhabitants, and is incapable of supporting any. From the description in Mr. Dowsett's journal, there is no doubt that this was the place where he and the boat's crew were either treacherously murdered, or made captives, and carried to another island; and from the nature of the island, little doubt exists that the murderers were a transient fishing party, from some of the adjacent islands. All the facts that are known have been given previously.

Korsakoff was in sight for two days; but they were prevented from having communication with it by the boisterous state of the weather. On the afternoon of the 7th, an endeavour was made by a canoe to reach the ship, but without success: the sea was too rough for the boats to live, and the surf too great to permit a landing. Although a few persons were seen upon it, yet nothing showed that it was permanently inhabited. The appearance of Korsakoff was the same as that of the Pescadores, without any vegetable productions capable of sustaining life.

Korsakoff, though represented as one island on the charts, was found to be two. The smaller one lies to the southward of the larger, and is fourteen miles long by three wide. The larger island is about twenty-six miles long, trending northeast and southwest. It has an entrance into its lagoon on the south side.

Captain Hudson now came to the conclusion that his time would not permit him to proceed any further to the westward; indeed, the time appointed in his instructions to be at the Columbia river had already passed, and he was now distant from it upwards of four thousand miles, and would require some sixty or seventy days, in all probability, to reach the Northwest Coast.

This caused the abandonment of his visit to Strong's and Ascension Islands, two points I was in hopes would have been reached, not only for the information to be derived from a visit, but I was desirous of having a full knowledge of those islands. I also wished to break up what was deemed a nest of rogues, and to be the means of recovering

the property plundered in the several captures made by them, if any of it remained.

Captain Hudson, on the 8th, gave Mr. Knox orders to survey and land on Korsakoff, and thence proceed to Oahu, with all despatch; upon which the Peacock and tender parted company, for the purpose of avoiding detention by sailing together. The Peacock lost the trades in latitude 24° N. On the 18th, Captain Hudson was obliged to issue an order to put a stop to the exercise of the guns, on account of the decayed state of their carriages. On the 19th, they passed near the position of the doubtful island of Patrocinio, but without seeing any land. On the 20th, they fell in with great quantities of Janthina: this was in latitude 26° N., longitude 168° E. On the 21st, in latitude 28° 54′ N., longitude 177° E., the Anatifa were met with: they continued in vast quantities as far as latitude 35° N., and were seen as far east as longitude 164° W. Some of the patches were miles in extent, trending in a southeast-by-east and northwest-by-west direction. On the map showing the currents and whaling-grounds, I have marked the spaces occupied in the North Pacific, over which the soft molluscs have been found. By our observations it is equal in area to four hundred thousand square miles. The currents experienced on this cruise will be found exhibited on the Track Map, in the small atlas, as well as the winds.

On the 5th June, they fell in with the whale-ship Magnolia, which supplied them with about two hundred gallons of water, and a few potatoes. On the 13th, in latitude 24° N., they again found the trades.

On the 14th, they made the island of Oahu, but falling under the lee of the island, Captain Hudson despatched Lieutenant Perry and Mr. Speiden, the purser, to order the necessary supplies for the ship at Honolulu, to avoid any unnecessary detention there; they did not, however, reach their destination until late in the evening of the same day, where they found the Flying-Fish had arrived the day previous. Our consul, Mr. Brinsmade, hearing that the Peacock was in the offing, with his usual kindness and attention, filled a boat with provisions, and went off to her; these proved a very acceptable treat after the short allowance they had been on for the previous sixty days.

On the morning of the 16th, the Peacock anchored in the port of Honolulu. Captain Hudson now made every exertion to take in provisions, and overhaul the ship; the crew were allowed liberty of twenty-four hours, by dividing them into three parts, and one-third permitted to go ashore at a time, while the rest attended to the duty.

The two men, Wood and Kirby, were given over to the consul of Her Britannic Majesty.

By the 21st, they had embarked the provisions and finished the necessary repairs, when they sailed for the Columbia river.

In the latitude of 40° N., they met with the Anatifa and Velella, the ocean being literally covered with them: these continued to latitude 43° N., and between the longitude of 154° and 157° W. The temperature of the air was 51°, that of the water 53°. The weather had now become cold, damp, and cloudy. Until they reached the latitude of 45° N., they had the wind constantly from the eastern quarter; but after passing that parallel, it veered to the west-southwest, and so continued for several days, when it hauled to the southeast, and remained between that point and south, until they reached soundings off the bar of the Columbia river, on the 17th July, the day prior to the wreck, of which I have already spoken.

I cannot close this account of the cruise of the Peacock and Flying-Fish, without saying a few words in relation to the activity which this cruise evinces in Captain Hudson, his officers, and crew; this will be shown in a strong light, by stating the simple fact, that during this voyage the Peacock had sailed upwards of nineteen thousand miles; was two hundred and sixty days at sea, and only twenty-two in port, and that during the whole time, although they were exposed to great vicissitudes of climate, and had been long on short allowance, they returned to port without a single sick man on board.

KINGSMILL IDOL.

CHAPTER IV.

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CHAPTER IV.

COLUMBIA RIVER.

1841.

The Vincennes having sailed, I at once set about preparing for the survey of the river. I found that, agreeably to my first instructions, Captain Hudson had lost no time in despatching the parties for the interior, but the orders I had sent by Mr. Waldron, arrested their progress. I issued these orders because I anticipated that it would be necessary to make some change in the route they were to pursue; and in the mean time they would have more opportunity to prepare themselves for the journey.

Finding that Mr. Dana had not set out for the interior, I now saw and regretted the necessity of countermanding the orders for the party that was destined for the Rocky Mountains.

The boats of the Peacock were ordered to be fully manned and fitted out with all the requisites for surveying duties, and officers attached to each.

On the morning of the 9th, we began the survey. Some time had been before spent in taking a few angles and soundings, but with so little success, that I rejected the whole. The weather proved unfavourable for any of our operations, except that of putting up signals. We encamped at night on the small sandy island in the centre of the bay, where we were very uncomfortable, for the sand flew about and covered every thing. In the morning we had a thick fog, when I determined to go to Baker's Bay, where we could obtain water; for that of the Columbia is not fresh as low down as this point.

We found the tide exceedingly strong, and having some apprehensions that the boats might lose their way, I thought it better for us to make for the Chinook shore, and follow it until we reached the

cape. It may seem strange that this precaution should be taken, but it is necessary at all times, even in clear weather; for the tide is frequently so strong, that it cannot be stemmed by oars; and too much caution cannot be observed in passing across the bay. As little frequented as it is, many accidents have occurred to boats and canoes, by their being swept by the tide into the breakers on the bar, where all hands have perished. The Indians are very cautious, and it is only at certain times of the tide that they will attempt to make the passage.

We reached Baker's Bay in two hours, and formed our encampment; and here we determined to remain until the weather should become clear, and allow us to proceed with our duties.

As no news had been received from Passed Midshipman Eld's party, whom it will be recollected I had despatched from Nisqually to Gray's Harbour, by the Chickeeles, and as the time for which he had provisions had expired, I became apprehensive lest some accident might have detained him. I therefore despatched Lieutenant De Haven and Acting-Master Baldwin, with a few Indians, along the coast to Gray's Harbour, which is about forty miles distant, to convey a supply of provisions for that party, and to bring intelligence of them. This duty was executed by these gentlemen with promptness, and they reported that the party were struggling with difficulties of no ordinary character, of which I shall have occasion to speak hereafter.

RAMSEY.

GEORGE.

The weather continued rainy and cold; but this did not seem to trouble our native pilots, Ramsey and his brother George. While we were preparing our huts, these men were seen upon the bank, deliberately stripping off their clothes, which they carefully folded up, and placed upon the ground for pillows; they then lay down, and covering

themselves with a blanket, slept as sound as if on beds of down. I happened to see them arising in the morning, and they appeared refreshed and perfectly content, although it had rained hard all night.

These men were exceedingly fond of rum, the hope of obtaining which, when the daily ration was served out, was the great inducement that led them to accompany our parties.

These two were good specimens of the Flathead Indians, and I was therefore pleased at having an opportunity of sketching them with the camera lucida, of which sketches the cuts on the opposite page are copies.

Before I reached Astoria, Captain Varney, of the brig Thomas H. Perkins, had proposed to sell his vessel to the government, provided he could arrange his affairs with Dr. M'Laughlin. I now learned that Dr. M'Laughlin had arrived at Astoria, for which place I set out in the afternoon, in company with Captain Hudson. We embarked in the tender, but after proceeding some distance, we found it impossible to reach Astoria. We therefore returned to Baker's Bay, which we had some difficulty in reaching.

The next day we succeeded in reaching Astoria, and found that the arrangements for the purchase of the brig could be effected, and I therefore bought her for the United States for nine thousand dollars, after having her thoroughly examined by the carpenters of the squadron. On taking possession of this brig, I changed her name to that of "the Oregon."

This acquisition released me from much anxiety, by providing accommodations for the crew of the Peacock, and at the same time affording a suitable vessel to continue the operations of the squadron. Captain Hudson took charge of the Oregon, and the alterations necessary to adapt her for this service were at once commenced. After making these arrangements, Dr. M'Laughlin departed for Vancouver. He gave a passage to Messrs. Hale and Dana, Messrs. Peale and Rich having previously gone up the river. These gentlemen had already visited the country around the mouth of the Columbia, every opportunity having been afforded them by Captain Hudson. Several of the officers visited the mountain ranges, but did not succeed in ascending the highest peaks.

During the occupation of Astoria by the Expedition, the place became quite civilized-looking, in comparison to what it was on my first arrival, and a mart for all the commodities of the country. Besides our own men, there were many Indians to be seen lounging and moving about, seeking employment, or with some small articles to sell.

Short excursions were made by many of us in the vicinity, and one

of these was to visit the primeval forest of pines in the rear of Astoria, a sight well worth seeing. Mr. Drayton took a camera lucida drawing of one of the largest trees, which the opposite plate is engraved from. It conveys a good idea of the thick growth of the trees, and is quite characteristic of this forest. The soil on which this timber grows is rich and fertile, but the obstacles to the agriculturist are almost insuperable. The largest tree of the sketch was thirty-nine feet six inches in circumference, eight feet above the ground, and had a bark eleven inches thick. The height could not be ascertained, but it was thought to be upwards of two hundred and fifty feet, and the tree was perfectly straight.

It was the season of the fishery when the Peacock was wrecked, and the Kilamukes, Clatsops, and Chinooks, were collected in the neighbourhood. Many of these came with their families, and took up their abode near Astoria; for it costs them little trouble to move all their worldly goods. They generally had for sale salmon, venison, sturgeon, moccasins, and mats.

When the crew first landed, eight or ten salmon might be bought for a cotton shirt, or its value in red or green baize; but the Indians soon found that higher prices might be obtained for the asking, and before our departure from the Columbia river, the price was enhanced one-half.

The vicious propensities of the Indians were seen here, as they appear around all the posts of the Hudson Bay Company, or where strangers are encamped: gambling is the vice to which they are most prone. Both sexes are equally filthy, and I am inclined to believe will continue so; for their habits are inveterate, and from all the accounts I could gather from different sources, there is reason to believe that they have not improved or been benefited by their constant intercourse with the whites, except in a very few cases. It is indeed probable that the whole race will be extinguished ere long, from the natural effects of their mode of life, even if no pestilential disease should come among them to sweep them off in a single season.

I saw more of their gambling here, and the lengths to which they carry it, than in any other place, in consequence of having occasion to come oftener in contact with them. The game most practised was played by one of them concealing two small sticks in the hand so adroitly as to elude scrutiny, while the others guessed which hand contained them. Two parties play at this, sitting upon different sides of a large board; and whilst the concealment of the stick is going on, they keep up a kind of chaunt and beating with the sticks, to produce confusion and noise, in order to distract the attention of the players. The air they sing is—

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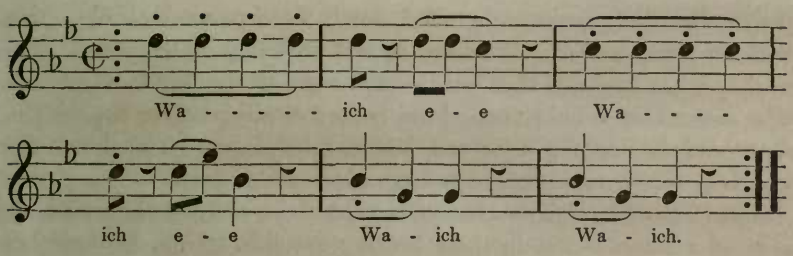


This game seems to amuse them, not only for hours but for whole nights, and the great cause of excitement lies in the stakes. Ten is game, and the party lose or win two at each guess.

They have another sport, which seemed to be the favourite with the Indians around Vancouver: this is played with a number of disks of bone or ivory, of the size of a quarter of a dollar, one of which differs from the rest. These are concealed in tow or fibrous hemp, and the guessing takes place in the same way. With these disks the players make a great noise by shaking them in their hands. There is great attention required in those who venture to play the game; and such appears to be its fascination, that I have seen them deprive themselves of one garment or article after another, until they were entirely destitute; and it is even said they often stake the freedom, not only of themselves, but of their children.

At Astoria we saw one day, when there was quite a crowd of Indians at the encampment, several squaws, all dressed in their best attire. These were all more than usually attentive to their personal appearance. The principal among them was a widow, whose time of mourning for the death of her husband had just expired. Her object was to notify her friends that she was ready to receive the addresses of any one who was in want of a wife. To give such notification was, as I found on inquiry, a common custom among the Chinooks.

The widow was of masculine make, and what we would call a buxom dame. She was attended by seven others, of small stature in comparison, who were her maids, and all evidently accompanied her to do honour to the occasion. Every half hour they would arrange themselves in a row, and the widow at their head, affecting a modest downcast look, would commence a chaunt, informing the bystanders that her period of mourning was out, that she had forgotten her deceased husband, given her grief to the winds, and was now ready to espouse another. This chaunt was accompanied by a small movement of the feet and body, which, with the guttural song and consequent excitement of such an exhibition, caused the fair ones to wax so

warm that the perspiration rolled down their painted cheeks; this, with the crimson flush, all tended to add brilliancy to their dark eyes, as they were now and then cast around upon the multitude of Indians, who seemed all admiration. I did not ascertain whether the fair one succeeded in winning a second husband, but I am satisfied that her exertions were such as ought to have obtained her one.

The Chinook and Kilamuke tribes entertain, as I was informed, the idea of a future state, in their hunting-grounds, which, in their language, they call Tamath. The road to them is supposed to be difficult, and none but those who are of good character can go there, by the road which is called O-tu-i-huti, a term by which they designate the Via Lactea. They have a strong belief that all their departed relatives and friends have a guard over them, and prevent evil from approaching them. Each Indian has his tamanuus, or spirit, which is selected by him at a very early age, and is generally the first object they see in going out to the woods, that has animal life. Others create from their imagination one that has never met mortal eyes. The choice of a spirit, however insignificant it may appear, has a great influence on their after-life; for, by its supposed commands, they are directed to good or evil, as they conceive that a nonconformity to its wishes would involve them in a multitude of evils, for they suppose it is able to destroy health, or preserve it, or inflict miseries without end.

They at times, and particularly when in the water, pretend to hold converse with it, and talk to themselves in a low, monotonous tone of voice.

Ikaui is the name of their most powerful god: to him they ascribe the creation of all things. A mountain is called after him, from its being supposed that he was there turned into stone, and they point out the principal rock, which rises in a pyramidal shape, as his statue.

They believe that their departed friends and relatives have a knowledge of what is going on among the living; and they, in consequence, will not eat in sight of the dead, nor laugh, for fear their mouths will be turned askew. With the dead, they bury, as in other parts of Oregon, their guns, knives, pots, and kettles; and I was informed that these articles would not be stolen when thus deposited. I presume, however, that such is not the fact, for I observed that these things had always been previously rendered useless, by either being burnt, or having holes punched through them, in order to take away the temptation to theft. Formerly, slaves were not unfrequently killed at a chief's funeral, in order to bury them with their masters. They speak of the dead walking at night, when they are supposed to awake, and

get up to search for food. They have many superstitions, that have been already noticed, of which that relating to the salmon is the most singular, and the most strictly adhered to.

The god who made the Columbia river, and all the fish in it, they call Italupus. He taught their ancestors how to procure fire, make nets, and catch fish. The first salmon caught are all tabooed, and they dare not sell them; they must all be cut up and cooked the day they are caught. A dog must never be permitted to eat the heart of a salmon; and in order to prevent this, they cut the heart of the fish out before they sell it.

Italupus is supposed to nourish the salmon, and cause them to be abundant during the whole summer, that they may lay up their store of it for the winter.

Having completed all the arrangements, and the weather becoming fine, on the 16th we resumed our duties in the survey, which was now carried on with spirit. The stations being established, and the triangulation completed, the tender, with two boats, was left to sound out the bay, while the remaining part of the force was moved up the river, to continue the surveys, in company with the Porpoise and Oregon; for I now found it necessary that both vessels should proceed up to Vancouver. This was not only to insure a more thorough outfit for the Oregon, but it also served to forward the surveying duties, and to afford the officers and men such quarters at night as would protect them from the sickly season, that was approaching, and of which we had received such unfavourable accounts. The plan adopted for the survey of this river will be given in the Hydrographical Memoir.

On the 18th of August, I left Astoria, with the Porpoise and Oregon, to continue the survey. We reached Tongue Point, where we anchored, previously to crossing thence to the opposite side of the river, through the crooked channel which was then believed to be the only passage by which a vessel of any class could ascend the stream.*

On the 19th, the vessels attempted to pass through this channel, but on entering it they both took the ground. The tide was at its full height and soon began to fall, when the Porpoise began to keel over, until she fell on her beam-ends. We were in hopes that the night tide would be sufficient to float her off, but we found its rise less by nearly a foot than that of the day; it therefore became necessary to make extraordinary exertions to prepare for the next day's tide by buoying

* A channel which we afterwards discovered, leads directly upwards from Tongue Point, and affords every desirable facility for the navigation of the Columbia river.

her up with casks, which, fortunately, we had at hand, on board the Oregon. It now became necessary to float her off, in order to avoid a second failure. We therefore had recourse to passing her chain cable under her bottom, to which a line of casks was lashed on the weather side, at the same time the launch was suspended as a weight from her masthead to preserve her in the same position. The hawsers that had been landed at Astoria by our store-vessels were sent for and attached to the brig's anchors, and so placed as to haul her at once into the deepest water and through the narrow pass. When all was prepared, a strong wind arose from the seaward, and caused a swell which broke adrift some of the casks, leaving sufficient, however, to float her before high water.

I was much relieved when I saw her again float, for I had felt not a little anxious lest in the drifting sands of the river she might have formed a bed, which would have placed it out of our power to get her off before the next spring tides, and would have compelled us to discharge all her guns, &c. Although this would have been attended with a great deal of trouble, it would have been of little consequence compared with the loss of time, which we could ill afford to spare.

After getting her off, we ran up the river a few miles, and anchored just below the Pillar Rock, and opposite to Waikaikum. Waikaikum belongs to a chief named Skamakewea, and is a large lodge, picketed around with planks.

Mr. Hale passed two days there, and obtained much interesting information from him relative to his tribe. This chief formerly had a large tribe under him, but since the year 1830 the fever has destroyed them nearly all. The portion of this country more immediately affected by this scourge, extends along the banks of the river from the ocean to the Cascades; but that part of it which is within the influence of the ocean tides, is the least subject to its ravages. When an Indian contracts this disease, he seldom recovers, for the treatment he goes through is sufficient to kill a person in good health.

Pillar Rock is called by the Indians Taluaptea, after the name of a chief, who in bygone days lived at the falls of the Columbia, and who, having incurred the displeasure of their spirit, called Talapos, was turned into a rock, and placed where he would be washed by the waters of the great river. The rock is twenty-five feet high, and only ten feet square at its top: it is composed of conglomerate or pudding-stone, and is fast crumbling to pieces. I found great difficulty in ascending it.

The next morning, in proceeding up the river to carry on the

survey, one of the small boats of the Porpoise, that we had in tow, was, through the negligence of her crew, capsized. Every thing in her except her oars was lost, and in addition to this the accident caused us much detention.

In the afternoon we reached Katalamet Point, and anchored at the lower end of Puget Island, where we passed the next day (Sunday). On Monday we again resumed our surveying duties, and reached Oak Point, where the river takes a turn to the southward and eastward. On the 24th, Lieutenant Emmons joined me, and received his instructions to pass through the country to the south, and join the ship at San Francisco. His instructions will be found in Appendix IV. Just before reaching Walker's Island we ran aground, by the pilot mistaking his marks, but were soon relieved. In the evening of the next day, we reached Mount Coffin, at the mouth of the Cowlitz. This mount afforded a favourable point for astronomical observations, being seven hundred and ten feet high, and quite isolated. The canoes used by the Indians as coffins are seen upon it in every direction, in all stages of decay. They are supported between trees, at the height of four or five feet above the ground, and about them are hung the utensils that had belonged to the deceased, or that had been offered as tokens of respect.

I remained the whole day on the top of this mount, and obtained a full set of observations; the weather being remarkably clear and beautiful. Here my boat's crew carelessly omitted to extinguish the fire they had used for cooking our dinner, and as we were pulling off to the brig, I regretted to see that the fire had spread, and was enveloping the whole area of the mount; but there was no help for it. The fire continued to rage throughout the night, until all was burnt. I took the earliest opportunity of explaining to the Indians who were in the neighbourhood, that the fire was accidental; and, after receiving a few small presents, they appeared satisfied that it was so. But a few years earlier, the consequence of such carelessness would have been a hostile attack, that might have involved us in difficulty of no ordinary kind. We had a minor punishment to undergo, for the smoke was so great that it enveloped all the signals towards the mouth of the river, and made it necessary for me to anchor within sight of Mount Coffin till the next morning.

Before reaching the mouth of the Willamette, better known here as the Wapautoo Branch, a long flat extends across the river, where we were again unfortunately detained a few hours, by getting aground. Warrior's Point, the locality where Mr. Wyeth proposed to erect his great city of the west, was passed; and on the 28th, at sunset, we

anchored off Vancouver. Here we found that Sir George Simpson had arrived over-land from Canada, on a tour of inspection, and on his way to visit the Russian settlement at Sitka. The next morning we had a visit from him, accompanied by Dr. M'Laughlin, Mr. Douglass, Mr. Rowan, and Mr. Von Freeman, of the Russian Company.

Sir George Simpson left England the preceding month of March, and was to return thither by way of Kamtschatka: a journey which he hoped to perform in less than two years. He had seen much service while acting as an officer of the Hudson Bay Company, from which he has retired, and in which he now holds no share. Since his retirement, he is employed by the stockholders of the Company, as the inspector of all the departments, and to report upon the state of the trading posts; this leaves him free to act without prejudice.

The mode of apportioning the profits of the Company is as follows: after a certain per centage is paid to the stockholders who own the capital, the surplus is divided among the active partners, including the chief factor, traders, &c.: who are thus all interested in the profits arising from their own exertions. In order that Sir George Simpson may be impartial in adjusting and reporting on the affairs, he receives a salary of two thousands pounds a year. Sir George has been lately knighted, for projecting and superintending the outfits of the voyage of his nephew, who completed the discoveries in the north, and the history of whose melancholy end has become so well known to all interested in Arctic discoveries.

Captain Hudson, the officers, and myself, were invited to partake of a formal dinner at Vancouver: on this occasion, all the functionaries of the Company were present, and each individual seemed to have his place assigned him. It reminded me of the description of a feast of feudal times, for there were many "below the salt."

Like all great dinners, it was stiff and formal. Sir George Simpson occupied the head of the table, and there were none but men present. Their wives seem to be little thought of, but for what reason I could not imagine, as many of them were highly worthy of notice. Their frequent exertions in protecting the settlements and their husbands, show a devotion to them and their interests, that is highly commendable; and why they should not be treated as their equals, I am at a loss to conceive. They will bear an advantageous comparison with any others who have had so few opportunities. Those whom I saw exhibited both propriety of behaviour and modesty of deportment. It may perhaps be, that their seclusion from mixed society is their own choice; but such a regulation cannot but tend to prevent improvement, and retard advancement in civilization.

The Columbia river was now very different in appearance from what it had been in the month of June. The stream was confined within its narrowest limits, and was nineteen feet below high-water mark.

The Indians were now encamped on the strands, over which the volume of water had rushed, in its swollen state, with irresistible force. Vancouver exhibited the aspect of an extensive farming establishment, with its well-stored granaries, stacks of grain, &c. All showed that the crops had been plentiful, and gave ample proof of the industry and success of agriculture.

Soon after the wreck of the Peacock, Captain Hudson, hearing that Dr. M'Laughlin was in want of hands to aid him in the harvest, despatched the Kanakas belonging to the Peacock up to Vancouver, to assist in gathering it. It afforded some little pleasure to contribute this aid, and thus in some small degree to repay the attentions and kindness of the Company's officers.

While at Vancouver, my time was taken up by the astronomic and magnetic observations. The former gave its position in longitude 122° 39′ 34·6″ W., and latitude 45° 36′ 53″ N.

Having understood, from the gentlemen at Vancouver, that both Mr. David Douglas and Captain Belcher had found some discrepancies in their magnetic observations, which were quite unaccountable; and as they had experimented within the fort, I determined to make mine in my tent, on the banks of the river, where no apparent local attraction existed. There were, notwithstanding, some irregularities which I could not account for.

While I was thus engaged, Captain Hudson carried on the repairs of the Oregon with great rapidity. The articles necessary for this purpose which we ourselves were not able to supply, were cheerfully furnished us, at reasonable prices, from the stores and workshops of the Company. Indeed, nothing could exceed the kind attentions that were lavished upon us; and the moment we expressed a desire, it was immediately complied with.

On the 1st of September, Passed Midshipmen Eld and Colvocoressis, with Mr. Brackenridge and party, arrived. Orders were immediately given for them to join Lieutenant Emmons's party, on the Willamette; and they were finally despatched on the tour through to California.

It will be remembered that Passed Midshipmen Eld and Colvocoressis were ordered to make a journey through the Chickeeles country, to Gray's Harbour, just as the ship was getting under way from Nisqually, and that circumstances rendered their departure more hurried than it was desirable it should be. But through the kindness of Mr. Anderson

and Captains M'Niel and Scarborough, the party was not left in want of any thing very material.

The party under command of Mr. Eld, consisted of Passed Midshipman Colvocoressis, Mr. Brackenridge, Sergeant Stearns, privates Rodgers and Dinsman, John Brooks (seaman), Thomas Ford and Henry Waltham (ordinary seamen), with a half-breed boy, named Joe, who was to act as their interpreter.

They left Nisqually on the 19th of July, and proceeded towards one of the southwest arms of Puget Sound (of which we had but a few days before finished the survey) in two canoes, that had been purchased. They were sorry craft, but better could not be procured, and Mr. Eld was not disposed to delay on account of imaginary difficulties. His instructions will be found in Appendix XIV., Vol. IV.

I had told him he might be absent for forty days on his own resources, as I calculated he would, by the assistance of the Indians, be able to obtain both fish and game. I also enjoined upon him great attention to economy in the use of his provisions.

On the same evening, he arrived within a short distance of the portage; and the next morning Mr. Colvocoressis went, with the sergeant and boy, to an old squaw chief, who had promised, at Nisqually, to be their guide to the Sachal river, and to furnish horses and men to cross the portage. They returned at an early hour, without either horses or Indians, but with a promise that they were to be furnished the next day. The next morning they found that the chief had arrived, with five horses and a number of Indians, and was ready to transport the baggage. Some time, however, elapsed before an arrangement could be made for the large canoe, which was thought to be too heavy to transport; but this was finally settled by the same personage offering another in lieu of it, which, though of smaller dimensions, was accepted. Ten Indians were furnished to transport it and the rest of the articles, and they were soon in a condition to move. This despatch was principally owing to the directions and management of the squaw chief, who seemed to exercise more authority than any that had been met with; indeed, her whole character and conduct placed her much above those around her. Her horses were remarkably fine animals; her dress was neat, and her whole establishment bore the indications of Indian opulence. Although her husband was present, he seemed under such good discipline, as to warrant the belief that the wife was the ruling power, or, to express it in more homely language, "wore the breeches."

The portage was easily accomplished: it passes through a forest of lofty spruce and maple trees, with an undergrowth of common hazel

and spiræa; its length was four miles. The soil was composed of a shallow, black, sandy, vegetable earth.

On their route they passed three small prairies, one of which was about ten acres in extent, and lay on the northwest side of a lake: the lake, called Sachal by the Indians, was examined, and found to be one and a half miles in length, and three-fourths of a mile in breadth. It is surrounded on all sides by willow and alders; the soil about it was a light brown sandy loam; the forest extends down to the water, which is of a dark brown colour, as if tinged with vegetable matter; this, however, was not the case, for in taking the water up in a glass, it was found pure and crystal-like.

A line of soundings was taken across the lake, by which five and a quarter fathoms was found to be the greatest depth. It was said to abound in fish, but they did not succeed in taking any. In the lake were quantities of yellow lilies (Nuphar lutea), pond-weed (Potamogeton) of two species, and a water-lily (Nymphæa.)

Mr. Eld was told that there was another lake to the northeast, and set out with Mr. Colvocoressis, to visit it. The supposed lake was reached after a walk of five miles over the same kind of country, and proved to be only a pond, about two hundred yards in diameter, quite shallow, and covered, like the former, with water-lilies.

After their return they broke up the encampment, and embarking in their canoes on Lake Sachal, passed to its southern end, where they entered the river of the same name. This appeared at first almost impassable, for it was for four miles almost choked up with Sparganiums, Nuphars, &c., so that it was difficult to pass even with the small canoe. Its breadth was from twenty to sixty feet, and it was from three to twelve feet deep. The turns were sometimes so short, that the large canoe would be in contact with the thickets on the banks at both ends, and it required much force to drag her along, by pulling by the branches, and caused great labour in cutting their way. They also unfortunately lost their hatchet, which afterwards proved a serious mishap.

They were obliged to continue their course down the river until nine o'clock at night, before they could find any place to encamp, on account of the bog and jungle. At that hour they came to a small green spot, occupied by a party of Indians. Here Mr. Eld obtained some altitudes of the north star for latitude; and the next day, being compelled to make a portage of two miles to avoid an impassable part of the river, he employed himself, during the time it was making, in getting a full set of equal altitudes. By 6 P. M. they had carried every thing across and embarked; but the river was full of sand-bars, shallow

rapids, and sunken snags, which often compelled them to drag the canoe over by main force. The land on both sides of the river is flat, marshy, and well wooded. Among the trees were many ash. They stopped for the night at an Indian camp. Mr. Eld endeavoured to induce the old chief to accompany him down the river; but he declined, assigning as a reason that he was afraid of the Chinooks. He boasted that he was the chief of the Sachal tribe; but as the party had met with but two or three other Indians during the route, they were at a loss to know where the tribe resided.

On the 24th, they again embarked on the river, and had another fatiguing day; but being now provided with poles, they succeeded better in navigating the canoe. When they had proceeded some distance, they were overtaken by the squaw chief and her husband, who passed them quickly in a light canoe. During the day they saw several deserted native huts, situated on small prairies, extending back some distance from the river, and in the rear, on either side, were seen hills rising to the height of about fifteen hundred feet. No kind of rock had been observed on their route, except a single block of granite, which was passed on one of the prairies near Lake Sachal. The weather, for the few last days, had been fine and clear.

On the 25th, they set out at an early hour, and in passing one of the rapids in the large canoe, it came in contact with a snag, which tore off part of the gunwale, and half filled the canoe with water. At ten o'clock they reached the place where the Sachal enters the Chickeeles, which is there one hundred and fifty feet wide, and runs with a rapid current. The bottom was gravelly, and the surface smooth, except where a sand and gravel bar stretched across the river, in a direction about east-northeast. One lonely Indian was met at the junction, from whom they bought some pieces of dried elk.

The soil on both sides of the river, for about one-third of a mile back, was a deep, rich, alluvial loam, overgrown with poplar, willow, dogwood, and alder, with an undergrowth of raspberry. On the 26th, the old chief joined the party, and they all proceeded down the river together, to the point where the Kluckullum enters the Chickeeles, where they halted. No inducement could prevail upon the chief to serve as a guide up the Sachap, another branch of the Chickeeles.

In the afternoon they encamped at the mouth of the Sachap, and Mr. Eld made preparations to set out early the next morning, to explore it, having obtained a guide from among the Indians they met with at a fishing station in the vicinity. No fish, however, were to be procured, but on their descent they came upon several large flocks of teal, out of which Mr. Brackenridge killed four.

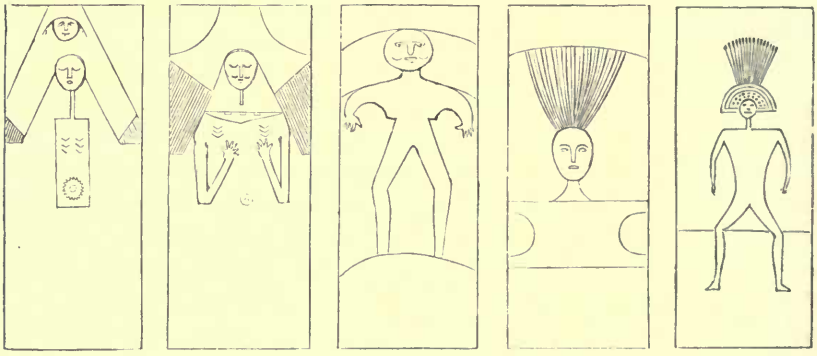
At an early hour on the 27th, Mr. Eld, Sergeant Stearns, and two men, set out on their jaunt up the Sachap, in a small canoe. About eight miles from the camp they came to the place where the river forks, forming the Sachap and Tarqucorau; here they took horses, and proceeded eight miles farther, in a northeasterly direction, and encamped in a small prairie. Neither of the two rivers is penetrable by a canoe, so overgrown and choked up are they with bushes and bogs. Just at sunset they passed a party of Suquamish Indians, who were very anxious that Mr. Eld should encamp with them; but this he declined doing, and preferred passing some distance beyond.

On the morning of the 28th, they again started at an early hour, and passed through a very rough and apparently little frequented country. The guide had much difficulty in finding his way through a forest which the fire had partly consumed. At 9^h 30^m they recrossed the Sachap, which was there a small brook, about twenty feet wide, coming from a northwest direction. It was but knee-deep, and clogged with large logs and trees. Shortly after passing this stream, the country grew so rough that it was impossible to proceed farther with the horses, and the guide told Mr. Eld that he would be obliged to leave them. As no notice of this difficulty in the route had been previously given, it was natural for Mr. Eld to suspect that his guide was forming some scheme to deceive him, and go off with his property. Deeming it proper to come to a right understanding, and to make the guide aware that he was on the look-out to punish any attempt at fraud, he led the chief aside, and told him that he intended to hold him responsible in case of the loss of any of his things, or of his being deceived. He then ordered him to leave one of his slaves in charge of the horses and effects until their return. This was accordingly done, and they proceeded on foot for Lake Nanvitz, which they reached by one o'clock. This proved to be a fine sheet of water, a mile and a half long, by three-fourths of a mile wide, surrounded by a thick forest of pines. Here they found an Indian family hunting, who had just killed an elk, of which Mr. Eld procured the greater part, for a small quantity of powder and shot. These were also of the Suquamish tribe. The old man of this party spoke of another lake, not far distant, to which he took Mr. Eld. This was no more than about half the size of the former, and the name the Indians gave it was Kamalatiz: it had much the same character as the larger one. There was no opportunity of getting the depth of these two lakes, for want of a canoe. Neither of them has an outlet. From the Indians' account, the Sachap takes its rise in a small pond to the northwest of these lakes.

Having accomplished the object he had in view, Mr. Eld turned back, and soon reached the place where they had left the horses and articles, which they found all safe, under the charge of the slave, who, from appearances, had not moved from his position during the time of their absence, and was much relieved at their return.

The next day they returned to their party on the Chickeeles, passing on their route some of the gigantic pine trees, so often to be met with in this territory. Some of these had been burnt, and had in consequence fallen; Mr. Eld thus had an opportunity of measuring them. One, that was not selected as the largest, for there were many of equal if not greater length and diameter, was measured, and the part that lay in one piece was found to be two hundred feet long; another piece of the same tree was twenty-five feet long, and at the small end of the latter, it was still ten inches in diameter. Allowing twelve feet for the portion destroyed by fire, Mr. Eld thought twenty-five feet ought to be added for its top; which makes the whole length of the tree, when growing, two hundred and sixty feet. Others were believed to exceed this, both in height and diameter.

During the time of Mr. Eld's absence, Mr. Colvocoressis remained at the camp, and Mr. Brackenridge made short excursions to the south of the Chickeeles. The country on this side of the river is covered with a thick spruce forest, and the soil appears to differ much from that of the north, being poor, and composed of a mixture of sand and gravel, while on the north side it is an alluvial deposit, averaging from a half to two-thirds of a mile in width, well adapted to yield good crops of grain. From the marks on the trees, however, it is believed to be subject to an annual inundation of considerable depth. The weather continued dry and clear.



CARVED PLANKS.

Near this encampment were found some rudely carved painted

planks, of which Mr. Eld made a drawing. They are represented in the wood-cut on the opposite page.

These planks were placed upright, and nothing could be learned of their origin. The colours were exceedingly bright, of a kind of red pigment.

In descending the Chickeeles the next morning, they soon perceived by its shores that there was an ebb and flow of the waters. Mr. Eld tried its current, and found it setting flood about one fathom per hour. As they proceeded, the shores lost some of their luxuriance of foliage, the banks had become high, and so muddy that they had some little difficulty in finding a suitable place to encamp. Some talcose slate was seen to compose the bluffs on the south side of the river, but it was so soft and fragile that it could not be brought away. The only natives seen this day were two miserable-looking beings of the Chickeeles tribe, but they could not understand the interpreter Joe, either in the Nisqually or Chinook dialect. The party encamped in a hemlock grove, so thick as to render it impossible for the usual nightly observations to be taken. The surf was distinctly audible from the camp during the night.

On the 31st, after passing two elbows in the river, the cape on the south of the entrance to Gray's Harbour was seen. The flood-tide was very strong against them, so that they made but slow progress, and as they opened out the harbour and entered it, they found a strong southwest wind blowing, which caused a short and disagreeable sea, that very nearly swamped their small canoe, and obliged them to run for the lee shore. Here all the things were taken out and placed to dry, on one of the huge trees that had been brought down by the freshets. From this awkward situation they were relieved by the old squaw chief, who had preceded them from Nisqually. She came over in her large canoe, with ten Indians, and offered to carry the party over to the weather shore, where they could encamp in a less exposed place. The offer was gladly accepted, and they were taken over to the village.

Mr. Eld here endeavoured to treat for the purchase of a large canoe, in which attempt his patience was soon exhausted, for when the bargain was all but closed, difficulties of a trivial nature were brought up which entirely broke off the negotiation. The Indians of this village proved themselves to be in all respects like the tribes in the interior, who will never adhere to a bargain if they can avoid it.

Mr. Eld and his party had now a great many difficulties to contend with in carrying forward a survey of the harbour. These arose as well from the weather as the want of means. The Indians for some

days continued unwilling to lend them any aid in the management of their canoes, and none of them could be induced to venture out in what they deemed stormy weather; another reason for not engaging in the service was, they did not wish to leave their wives behind. It being at last agreed that their wives should accompany them, Mr. Colvocoressis embarked in order to join Mr. Eld; but to do this it was necessary to encounter both the wind and sea, in consequence of which the Indians refused to proceed unless they had an extra allowance of powder and tobacco.

This being refused, they quietly steered the canoe back to the encampment. On arriving there, it soon became evident to Mr. Colvocoressis that their intention was to take away their canoe, for they at once began to put in her the few things they possessed. He therefore took two of their guns, and concealed them in one of the tents. An Indian, the moment Mr. Colvocoressis's back was turned to the tents, drew his knife, rushed into them, and brought forth the guns, one of which he handed to a woman. The musket which the squaw had was again taken, upon which the Indians said that they would complete their bargain, and induced Mr. Colvocoressis to believe they would do so. He therefore embarked, and they proceeded with apparent willingness, until they came opposite their own village, where they landed, and refused to go any further. They, however, offered him a small canoe, to take him across the river, and the Indian to whom the musket they had taken belonged, ferried him across. In the evening, the Indians returned to ask for the musket, but it was refused until they should return the axe that had been left in the canoe, and agree to abide by the bargain they had made to render them assistance. The next day the axe was restored, and the musket given up. After this, a more friendly disposition was evinced, as Mr. Eld supposes from the fact of their having learnt from Nisqually who they were.

From the 1st to the 6th of August, the party effected little, and their supply of provisions was becoming very low. On the latter day they shifted their camp, about five miles towards the capes, to a small patch of meadow-land, near one of the small streams which empty into the harbour.

After remaining here a few days, they selected another spot, at the South Head; and on the 10th, the Indians failing to perform their engagements, they moved their articles themselves to their new encampment. They had now very nearly exhausted their provisions, and were living on the dead fish they picked up on the beach (a sort of hake) and some berries. From continual exposure to wet, with hard work, as well as scanty and bad food, they all became very feeble and

sick, and were able to do but little work. On the 13th, Lieutenant De Haven, whom I had sent over, arrived, and relieved them; and on his return to Baker's Bay, twenty days' provisions were sent with a party of Kanakas, under the guidance of Boileau, a Canadian.

This supply reached them on the 19th August, from which time they proceeded rapidly with the survey, when the weather would permit. Previous to the arrival of Lieutenant De Haven, Mr. Eld and his party had parted with their own clothing and blankets, for the purpose of effecting the purchase of a large canoe to carry on their work. The Indians refused to deliver it, except for actual pay; for they had not yet learned to value the small pieces of paper, or orders on the Company's store, so much prized in the upper country, and which are there usually preferred to the articles themselves. The threat to stop trading for powder, Mr. Eld found was a strong inducement to accomplish any object with the Indians, for they prize this and tobacco beyond any other articles, always excepting rum.

Mr. Eld, in one instance, treated one of the Indians to a pipe and tobacco, which affected him so much that they thought he was going into a fit, and created considerable alarm. This effect arises from their mode of using the pipe, for they invariably swallow the smoke, and retain the greatest part of it in the stomach and lungs.

On the 24th, the survey was finished, and they prepared for their departure. The tract of land bordering on the Chickeeles, below the mouth of the Sachap, and around Gray's Harbour, is of a poor description for cultivation. The spruce forest extends down to the water's edge, except in a few places around the harbour, where there are patches of salt marsh, which produce coarse grasses and cat's-tail (Typha). The salt creeks into which the tide flows are generally very tortuous; and the meadows are occasionally overflowed at spring-tides. The only piece of land that appeared suitable for cultivation, was immediately within the South Head; but this is of small extent. The coast, as far as Cape Shoalwater, is no more than a smooth sandy beach, which rises in a gentle acclivity to a line of low sand-hills.

Mr. Brackenridge describes the coast vegetation as consisting of Oberonia, Neottia, Ambrosia, two species of Aster, several Gramineæ, an Armeria, with a number of saline plants; the Gaultheria is found in great abundance, bearing a palatable berry, of which the party had occasion to make use. For further information respecting the plants of this section, I must refer to the Botanical Report.

Gray's Harbour seems to offer but few facilities for commercial purposes. The entrance is narrow, the width being from one-half to

two-thirds of a mile, with dangerous breakers on both sides. The depth of water is from five to seven fathoms. The space, after entering, is extensive, but the greater part of it is filled up with mud-flats, which are bare at low water, and confine the harbour suitable for the anchorage of vessels to very small limits. The river Chickeeles, before entering into the harbour, increases in width to several hundred feet, and is navigable for vessels drawing twelve feet water, eight miles above its mouth. The harbour is only suitable for vessels of from one to two hundred tons; and there are places where such vessels may find security between the mud shoals, some distance within the capes.

The tides here are irregular, and influenced by the winds and weather; the time of high water at full and change was found to be $11^h\ 30^m$.

Fogs prevail very frequently during the summer season. Our party remained at this place for twenty-three days, three-fourths of which time it blew a strong gale from either the southwest or northwest, accompanied with a dense fog, that rendered it impossible to see farther than half a mile.

The Indians in this portion of the country are not numerous. The region at the head of Puget Sound is inhabited by a tribe called the Toandos, whose number Mr. Eld was unable to learn. The Sachals are about forty in number: they reside about the lake of the same name, and along the river Chickeeles: they appear to be a kind and inoffensive tribe. The Sachap tribe numbers about sixty: they are not as well off for clothing as the former, and few of them were supplied with fire-arms; they reside on the borders of the Sachap river. The Chickeeles tribe number from one hundred and fifty to two hundred, and inhabit the country around Gray's Harbour: their principal place of abode is on the north point of Gray's Harbour, which is generally occupied by those passing to and fro, and where they await fine weather. Mr. Eld found this tribe supplied with good muskets, blankets, and knives: they paint their faces, and have altogether a warlike appearance. At one time during the stay of the party they were disposed to be troublesome, but the men being constantly on the watch, to protect themselves, remained unmolested, though occasionally annoyed at the disposition evinced to take advantage of any oversight. The chief of this tribe is spoken of by the party in very high terms, for his kindness to them. He seemed mortified at the events which occurred, and took much pains to keep his people in order. In this, notwithstanding he possessed little au-

thority among his tribe, he succeeded, although with difficulty. As a proof of his good intentions, he invariably returned all the signals the others had stolen.

This tribe lives principally on salmon, which they take during the season in vast quantities, and the fish are said to be as fine as those taken in the Columbia. On the Chickeeles, and in its branches, are many of the weirs and stakes that have been already described. Sturgeon are also taken in great numbers, and of a superior quality.

It may be inferred from their seldom receiving any supplies of venison through the Indians, or meeting with any themselves, that there is but little game in this part of the country.

They shot a few grouse, some wild geese were seen, and the mud-flats were covered with white gulls in immense numbers, among which were a few pelicans.

The amusements of the Indians, and the manner of lounging away their time, were similar to those of the other tribes before spoken of.

On the 24th, they were glad to leave Gray's Harbour, after having, by great perseverance and with much fatigue, completed the survey. Mr. Eld now took up the remaining portion of the work he was ordered to perform, namely, to trace the coast to Cape Disappointment. The Indians whom he hired to take the canoe around by water, preferred to pass close along the beach, inside the surf, by tracking the canoe: notwithstanding there was a very heavy surf, they managed to pass along very quickly. This is the mode they always adopt in journeying along the coast with their canoes, to avoid accident from the heavy surf, of which they have much dread. The evening of the day on which they left Gray's Harbour, they reached a small islet, distant fifteen miles from Cape Shoalwater, where they found the lodge of the Chickeeles chief before spoken of, who supplied them with dried salmon, &c.

The coast between Gray's Harbour and Cape Shoalwater is bordered by sand-hills, behind which, from the Indians' account, there are lakes and streams of fresh water, in which plenty of beaver are found.

From this chief they hired another canoe, and accompanied by him they proceeded through Shoalwater Bay towards Cape Disappointment. The two canoes separated, which caused them to pass over the two portages between Shoalwater and Baker's Bay: that to the east is about four and a half miles in length, while that to the west is six or seven miles across. The former is usually preferred by the Indians, and is one of the main passes of communication between the different tribes on the sea-coast. The woods through which they

passed were of spruce trees, some of which were of large dimensions; the lesser plants were principally Vaccinium, Ledums, and some candleberry-bushes (Myrica).

On the 27th they reached the Flying-Fish, then in Baker's Bay, and were taken over to Astoria.

Mr. Eld received, on his arrival at Astoria, my orders to repair with his party to Vancouver; where, being furnished by Mr. Birnie with a large flat-bottomed barge, he set out to join me at that place, which he reached on the 31st August.

I cannot refrain from expressing the satisfaction I felt at the manner in which the service was performed, and deem it my duty to make known to the country the commendable perseverance with which this party persisted in completing the duty assigned them, regardless of inconvenience, privation, and discomfort. This tour forms a part of the operations of the Expedition that I look back upon with pride and pleasure, and I feel that my thanks are especially due to Passed Midshipmen Eld and Colvocoressis, and Mr. Brackenridge, for their devotion to the service in which they were engaged.

Orders were immediately given for them to join the over-land expedition to California, under Lieutenant Emmons, who was just about proceeding to the Willamette Valley, where his party had been organized, with our own force and the settlers and trappers who were engaged to accompany it to California. After the party was collected, it consisted of—

Lieutenant Emmons,	T. R. Peale, Naturalist,
Passed Midshipman Eld,	W. Rich, Botanist,
Passed Midshipman Colvocoressis,	J. D. Dana, Geologist,
Assistant-Surgeon Whittle,	A. T. Agate, Artist,
Doughty, Seaman,	J. D. Brackenridge, Assistant Botanist,
Sutton, "	Baptist Guardipii, Guide,
Waltham, "	Tibbats,
Merzer, "	Black,
Sergeant Stearns,	Warfields,
Corporal Hughes,	Wood,
Private Marsh,	Molair,
Private Smith,	Inass.

Those who joined the party for a safe escort, were Mr. Walker and family, consisting of his wife, sister, three sons, and two daughters; Burrows, wife, and child; Nichols, with Warfields' wife and child.

The whole party numbered thirty-nine, with seventy-six animals, forty-four of which were private property.

Lieutenant Emmons at first found much difficulty in organizing his party, on account of having to deal with persons who had little

or no regard for the promises they made, or the engagements they entered into. This feature of character proceeds both from a desire to obtain more money, and a want of stability of purpose. Many difficulties were encountered by him in consequence of the change of his route to California, which many of those who were to have accompanied him were unwilling to undertake. These were the very best men we had engaged. Every kind of embarrassment seemed to come upon him at once: delays and disappointments occurred every day; sickness overtook the party; rumours were circulated of danger from the Indians, who it was said were determined to oppose the party and cut it off. Some of the settlers refused to re-engage, because their crops required attention, and their harvest might be lost; others said that they could not leave their families for so long a time; and amidst these various sources of delay, the animals strayed away, or were carried off. The whole, finally, resolved itself into a demand for higher wages.

Lieutenant Emmons, though exceedingly annoyed by all these difficulties, showed himself fully equal to them, and by patience and perseverance overcame them all. Mr. Rodgers, whom I had designated as the provider of the party, and in whom I was told great reliance could be placed, was not exactly suited to such a task, being connected more or less with the inhabitants of the valley, and about to become one of the residents; he also was soon unable to attend to business on account of sickness: before the organization of the second party, therefore, he was discharged and paid off. At this point I shall leave the narrative of the operations of the over-land party, until I come down to the date when they again joined me at San Francisco.

The observations and surveys in the neighbourhood of Vancouver being finished, we prepared for our departure. The weather during our stay had been delightful, and we enjoyed ourselves very much in the company of Dr. M'Laughlin, Mr. Douglass, and the officers of the Hudson Bay Company.

I have before spoken of their attentions, but I feel that my expressions are few in comparison with the numerous kindnesses we all received. Even Billy Bruce the gardener made us his debtor, by sending us repeatedly some of the fine fruit and vegetables grown under his care. I have endeavoured to repay him, by sending him seeds; but the route is so long and circuitous, that it is questionable whether they ever arrive, and when they come to hand, if I shall not be classed by him with those who have sent "trash" to Vancouver, for him to waste his time and experience on, in attempting to cultivate.

Among the officers of the Hudson Bay Company, I must not forget to mention Dr. Barclay, whose kind attentions in procuring specimens for the Expedition, entitle him to our gratitude.

Sir George Simpson stayed only a few days. He took his departure under a salute of guns from the Cadborough, and the attendance of all the officers and dependants of the forts. Mr. Douglass went with him; and in his suite was also Mr. Von Freeman, a Russian gentleman, with whom I was much pleased. He was going to Sitka, and I believe was one of the officers of the Russian Company.

The number of posts occupied by the Hudson Bay Company in this territory is twenty-five: these are located at the best points for trade, and so as to secure the resort of the Indians, without interfering with their usual habits. Places are also occupied in the vicinity of their abodes during the most favourable part of the year, for obtaining the proceeds of their hunting. This is regulated with much skill; and the portion of the country once under their care is never suffered to become exhausted of furs; for, whenever they discover a decrease, the ground is abandoned for several years, until the animals have time to increase again.

A charge has been made against the Company, that they were desirous of exterminating the beaver south of the Columbia, and would continue to hunt them until every fur-bearing animal was exhausted. This, from the information I received, I believe to be erroneous; the story has probably proceeded from feelings of rivalry on the part of those who spread the report.

Another charge made against them, of exciting attacks on the free trappers, who are generally from our borders, is to be received with many allowances. It has been made in many cases from interested motives; and I am satisfied that nothing of this kind could emanate from Vancouver, or from any of the officers.

The whole conduct of Dr. M'Laughlin is totally at variance with such a course: every facility has been at all times extended to newcomers and settlers; it is sufficient that they are of good character, and the use of cattle, horses, farming utensils, and supplies, is invariably extended to facilitate their operations, until such time as they are able to provide for themselves.

During our stay at Vancouver, I had the pleasure of seeing many members of the Willamette Mission; but they were unable to give me much information. They invariably spoke of Dr. M'Laughlin in the highest terms: they were averse to his absolute rule over the whole territory, and, although it was considered by them as despotic, they could not adduce any instance of the wrong application of his

power. He is notwithstanding extremely unpopular among all classes of our countrymen, but for what reason it is difficult to conceive.

Dr. M'Laughlin obligingly favoured me with the heights of the stopping-places, or encampments, on the route that is usually taken by their parties crossing the Rocky Mountains: the results were obtained by the boiling point of water. The journey was made during the months of August, September, and October, 1839.

			WATER BOILS.	HEIGHT DEDUCED.
August 29th,	at	Edmonton,	207°	2566 feet.
September 22d,	"	Jasper's House,	204·5	3867
" 29th,	"	Camp d'Origal,	203·5	4391
" 30th,	"	Camp de Fusil,	201	5716
" "	"	Punchbowl,	198	7324
" "	"	Head of Grand Cote,	202	5188
October 1st,	"	Bottom of Grand Cote,	204	4131
" 3d,	"	Boat Encampment,	205	3607
" 8th,	"	Colville,	208	2049
" 14th,	"	Wallawalla,	209·5	1286

This may be considered as a near approximation to the true height, and at several of the places where the barometer has been also used, there is a very close coincidence in the results.

The instrument used for the experiment was one of Newman's make, and exceedingly convenient for such purposes, offering great facility in use, without the danger of accident from its size.

The trade and operations of the Hudson Bay Company are extensive, and the expense with which they are attended is very great. I am inclined to think that it is hardly possible for any one to form an exact estimate of the amount of profit they derive from their business on the west side of the mountains. The stock of the Company certainly pays a large dividend; and it is asserted that in addition a very considerable surplus has been accumulated to meet any emergency; yet it may be questioned whether their trade in the Oregon Territory yields any profit, although it is now conducted at much less cost than formerly. This diminution of cost arises from the fact that a great part of the provisions are now raised in the country by the labour of their own servants.

The Puget Sound Company, although it has been in operation for several years, has made no dividends. The accumulation of their live-stock may, however, be considered as an equivalent for moneyed profits. In the event, however, of the country becoming the abode of a civilized community, the farms and other land possessed by this Company must become very valuable, as the posts occupy all the points most favourably situated for trade, and the agricultural esta-

blishments have been placed in many of the best positions for farming operations. The utmost economy is practised in every part of the establishment of the Hudson Bay Company, and great exertions are made to push their operations over a larger field of action. Mercantile houses, supported by the credit and capital of the Company, have even been established at the Sandwich Islands and San Francisco, where articles of every description imported in the vessels of the Company may be purchased.

The value of all the furs obtained on this coast does not exceed forty thousand pounds annually; and when the cost of keeping up their posts, and a marine composed of four ships and a steamer, is taken into account, and allowances made for losses, interest, and insurance, little surplus can be left for distribution. I am, indeed, persuaded, that the proceeds of their business will not long exceed their expenses, even if they do so at present. The statement of the Company's affairs presents no criterion by which to judge of the success of their business on the Northwest Coast. I learned that it was the general impression among the officers, that such has been the falling off in the trade, that it does not now much more than pay expenses.

On my first visit to Vancouver, Dr. M'Laughlin was kind enough to offer to keep a meteorological diary for me, during my stay on the coast, that I might have the means of comparison. They had formerly been in the habit of noting the changes that occurred, and for many years had kept a journal; but this had been for some years omitted. The task would be but trifling in such a well-regulated establishment, and it is surprising that it should not have claimed more attention. The night observations seem to be the principal difficulty. In the register kept during our stay, the instruments were only noted in the daytime, and the record is not available for the mean temperature of the twenty-four hours; but as it may serve to show the state of the weather, during the summer months, at Vancouver, I will give an abstract from it. The barometer and thermometer were both compared with our standard, and found nearly to coincide.

MONTHS.	6 A. M.		2 P. M.		6 P. M.	
	BAROM.	THERMOM.	BAROM.	THERMOM.	BAROM.	THERMOM.
June . . .	30·71 in.	51°	30·27 in.	63°	30·30 in.	62°
July. . . .	30·40	61	30·36	87	30·37	72
August. . .	30·28	60	30·27	86	30·29	70
September. .	30·28	53	30·25	78	30·30	58

This gives the mean standing of the barometer and thermometer, during the day hours, at 30·32 in., and 66·33° for the summer months.

The state of the weather, during the period of one hundred and six days, was as follows:

Fair, ...	76 days.
Cloudy, ...	19 "
Rain, ...	11 "
	106

In my inquiries of the residents, I am inclined to the opinion that the above is a very fair estimate of the weather, though they almost all differed in their statements: some spoke of the season as a very bad one, others thought it was very fine. The crops of all descriptions of grain were good, which I supposed to be the best criterion.

The climate of the western section, throughout the year, is mild; and they neither experience extreme heat in summer, nor severe cold in winter. I am disposed to believe this to be owing to the constant prevalence of the southwesterly or ocean winds. It certainly is not owing to the influence of any warm stream setting along its shores. The current near the coast sets to the southeast, and is of a cold temperature: it would rather tend to lessen the heats in summer than the cold in winter. There have been no observations kept by the missionaries in this lower section of the country. It is liable, from the experience of our parties, to early frosts, owing to the proximity of the Snowy Mountains. Frosts sometimes occur in the latter part of August, which check all vegetation at that early season.

The southwest winds are caused by the vast extent of the sandy and arid country lying east of the Cascade and Californian range of mountains, which becoming heated rarefies the air, and causes an indraught from the west. This current is found to increase in violence as the rarefied region is approached; and so constant is this draught, that we experienced only three days of easterly winds during our stay, and these were very moderate in force. Immediately on the coast, the winds are from the west-southwest to west-northwest: these maintain their direction until they reach the interior, and blow with great violence.

The winters are invariably what would be termed open ones with us. Snow seldom falls, and when it does, it rarely lasts more than two or three days. The rains during this season are frequent, though not violent. The climate in the western section, from all accounts, is not unlike that of England, and would be termed a wet one. The winter of 1840 was the severest they had yet experienced.

The middle section is, on the contrary, exceedingly dry, and the temperature more changeable, the variations being great and sudden. The mercury has been known to fall as low as —18° in the winter, and to rise as high as 108° in the shade, in summer. In Appendix XIII., Vol. IV., will be found a register of the temperature, kept at one of the missionary stations, Lapwai, on the Kooskooskee. It may be said to be on the eastern border of the middle section.

The eastern section has an exceedingly variable climate: it fluctuates from cold to hot in a few hours, ranging through fifty or sixty degrees of temperature; yet, from the accounts I have, from very respectable authority, the cold is by no means severe for any length of time. The Rev. Mr. Smith, who was two years there, assured me that the cattle and horses required no other food than what they could pick up, the natural hay before spoken of being sufficient for their support.

The climate throughout Oregon is thought to be salubrious for the white race; and was considered so by the Indians, prior to the year 1830, when the ague and fever, or any disease resembling it, was not known to exist. The Indians fully believe, to this day, that Captain Dominis introduced the disease in 1830. Since that time, it has committed frightful ravages among them; not so much, perhaps, from the violence of the disease itself, as the manner in which they treat it. It was not until quite lately that they were willing to be treated after our mode, and they still in many cases prefer the incantations and practices of the medicine-man.

I satisfied myself that the accounts given of the depopulation of this country are not exaggerated; for places were pointed out to me where dwelt whole tribes, that have been entirely swept off; and, during the time of the greatest mortality, the shores of the river were strewed with the dead and dying. This disease occurs, it is said, semi-annually, and in the case of foreigners, it is more mild at each succeeding attack.

Owing to the above causes, the population is much less than I expected to find it. I made every exertion to obtain correct information, and believe that at the time of our visit, the following was very nearly the truth, viz.:

Vancouver and Washington Island, ...	5,000
From latitude 50° to 54° N., on the main, ...	2,000
Penn's Cove, Whidby's Island, including the main land (Sachet tribe,)	650
Hood's Canal (Suquamish and Toando tribes), ...	500
Birch Bay, ...	300
Fraser's River, ...	500
	8,950

Brought forward,	8,950
Clalams at Port Discovery, New Dungeness,	350
Port Townsend,	70
Classet tribe, Cape Flattery and Point Grenville,	1,250
Nisqually,	200
Chickeeles and Puget Sound,	700
Port Orchard,	150
Cowlitz,	330
Okonagan,	300
Colville and Spokane,	450
Kilamukes,	400
Chinooks,	209
Clatsops,	220
Cascades,	150
Pillar Rock, Oak Point, and Columbia River,	300
Willamette Falls and Valley,	275
Dalles,	250
De Chute's and John Day's River,	300
Yakima,	100
Wallawalla,	1,100
Blackfeet, that dwell principally on the west side of the Rocky Mountains,	1,000
Umpquas,	400
Rogues' River,	500
Klamets,	300
Shaste,	500
Callapuyas,	600
Total,	19,354

The whole territory may, therefore, be considered as containing about twenty thousand Indians; and this, from a careful revision of the data obtained by myself and some of the officers, I am satisfied, is rather above than under the truth. The whites and half-breeds were between seven and eight hundred. One hundred and fifty were Americans. The number of the latter has, however, increased very much since the year 1840, as many emigrants have crossed the mountains. The decrease of the red race is, no doubt, equivalent to the increase by immigration.

The surveying parties having returned, on the 14th we took leave of Vancouver. After proceeding down to the mouth of the Willamette, we anchored, for the purpose of finishing the soundings and making an examination of the channels into which the river is here divided by a few islands.

This work being completed, we dropped down several miles, to overtake the sounding parties. Here we were a good deal annoyed from the burning of the prairies by the Indians, which filled the atmosphere with a dense smoke, and gave the sun the appearance of being

viewed through a smoked glass. We were, fortunately, in a great degree, independent of it, as it was not necessary to see more than a short distance to discover the signals for the soundings. It however prevented me from verifying my astronomical stations, which I was desirous of doing.

Acting-Master Sinclair, who had been despatched to Vancouver for some articles belonging to the Oregon, that had been left there, joined us below Warrior's Point, on the 19th, with letters and news that had been brought from the United States by an over-land party. These letters were very acceptable, as we had not received any advices from home for twenty-two months, and tended to revive our spirits, as well as encourage our exertions. On the 20th, we anchored again off Coffin Rock, near which we found a depth of twenty-five fathoms, which is the deepest water within the capes. This place is sixty miles from the mouth of the river, and eight miles above the confluence of the Cowlitz. The shores here are composed of trap and a conglomerate, the last of which is the same rock as that which occurs below, and has already been spoken of. The Coffin Rock, which is not more than sixty feet in diameter, and twelve feet above the water, appears to have been exclusively reserved for the burial of chiefs. Dr. Holmes procured here some fine specimens of Flathead skulls for our collection. We anchored the same evening off the Cowlitz.

Early the next morning, I proceeded up the Cowlitz in my gig, in order to finish the survey of that stream and examine the strata of coal said to exist there. After entering it, it was with difficulty that I recognised the river; for there is a greater difference than even in the Columbia, between its high and low states. After passing up the Cowlitz several miles, I encountered rapids, through which it was necessary to drag the boat by a line. I found, after great exertion and fatigue, we could not ascend beyond thirteen miles; for it had become so shallow that the boat would not float, and we had not strength enough to force her over the wide bars of gravel and sand, that had apparently accumulated during the last spring. After securing some specimens of lignite that were found embedded in the alluvial banks, and taking observations for time, I turned back; and feeling anxious to reach the brig at an early hour, I ventured to shoot one of the rapids. In doing this, we all had a narrow escape; and particularly two of the boat's crew, who were in great danger of their lives. We fortunately escaped, but with considerable damage to the boat and a few bruises, the whole of which was the work of an instant. This taught me not to venture upon such an experiment again, and I felt thankful to escape

as we did. The Cowlitz is not navigable, except at high water during the spring and fall; and even then it is difficult to ascend, on account of the strength of its current.

We had now overtaken the sounding parties, and, aided by the boats of the brig, were enabled to push the work towards a close. Having reached the influence of the tide below Oak Point, all fears of the ague and fever vanished: we had indeed been extremely fortunate in exemption from this disease, and only those suffered from its attacks who had been before exposed. Those affected belonged chiefly to the Peacock, and the larger portion were Sandwich Islanders. The crew of the Porpoise were generally exempt from it: all recovered from the slight attacks under a simple treatment. I felt not a little satisfaction at disappointing the knowing ones, who had prognosticated the certainty of my having all hands sick and dying by attempting the survey in the unhealthy season. When we reached Astoria, we had nearly all hands on duty.

On the 26th, we had again reached Katalamet Point, the lower end of Puget Island. The brig passed down the usual channel on the south side, while I surveyed the northern passage. The latter is about four miles in length.

Puget Island affords no land fit for cultivation, and during the season of freshets is overflowed. It is fringed around its borders with cotton-wood, willow, pine, and hazel, &c.; but it may be considered valueless.

At this anchorage I was joined by Michel La Framboise, who brought a supply of fresh beef for the crew, which they were in much need of. Since I had first seen Michel, I had learned more of his history and the cause which led him to complain of a want of advancement. I regret to say, that, like too many others, he ought to look to himself as the cause of his misfortune, instead of indulging in complaints.

He confirmed much of the information I had received, and gave me full statements of the population, which I found to agree with what he had already imparted to officers belonging to the Company, as well as the Expedition.

I questioned him relative to the stories respecting the shooting of Indians, on the route to and from California, and he told me they had no battles, but said it was necessary to keep them always at a distance. On my repeating the question, whether the reports we had heard of several being killed during the late expedition were true, he, French-man-like, shrugged his shoulders and answered: "Ah, monsieur, ils sont des mauvaises gens: il faut en prendre garde et tirer sur eux quelquefois."

On the 29th of September we again reached the Pillar Rock, and on

the 3d of October we passed through the Tongue Point Channel. Before doing this, we took the precaution to buoy it out, and then towed the vessels through at high water. This enabled me to lay down its tortuous course with accuracy, although I was aware that there is little probability of its remaining over the season without some material change. The new and direct channel discovered by us, leading up from Tongue Point, will supersede the necessity of using it, and from its direct course, is more likely to be permanent; but the channels in this river will be always more or less subject to change, from the impediments the large trees drifting down cause, when they ground on the shoals.

The same evening we anchored about two miles above Astoria, and in order to lose no time, I proceeded there in my boat to make arrangements for getting off the stores, and embarking every thing previous to our departure.

I found that Purser Speiden had prepared for us ten thousand pounds of the best bread we had had during the cruise: this had been accomplished by his great perseverance and attention to the business, and I was thus relieved from all anxiety in regard to that indispensable article of the ration.

On the 1st of October, the Porpoise anchored at Astoria, and every body was now engaged in expediting the embarkation of stores on board of both vessels; the officers were detailed temporarily to the Oregon, whilst the necessary observations for the chronometers and magnetism were again made.

It now became important that the two larger vessels should be got to sea as early as possible. I therefore determined to seize the first opportunity that should offer for crossing the bar, and to return myself in the tender to complete the survey. We, in consequence, proceeded on the 2d to Baker's Bay, whilst the boats were still employed under Lieutenant De Haven in taking soundings. Acting-Master Knox and Passed Midshipman Reynolds, were now ordered to the Porpoise and Oregon, for the purpose of piloting them to sea, when an opportunity should serve. In Baker's Bay we found the Company's schooner, the Cadborough, which had been waiting three weeks for an opportunity to get over the bar.

As the Peacock's launch could not be taken with us, I had at one time an intention of sending her along the coast to San Francisco. The weather and advanced state of the season, however, would have rendered such a voyage dangerous; I therefore came to the determination of providing her with every essential to fit her to be used as a pilot-boat in the mouth of the river, or for the relief of vessels in

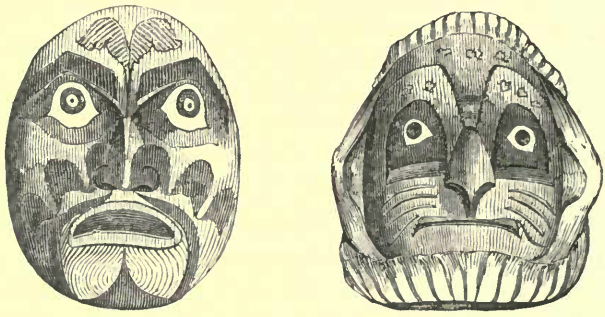
distress. Mr. Birnie, on my asking him to take charge of her for that object, would have readily consented to do so for the Company, but had no authority. I therefore immediately wrote to Dr. M'Laughlin, to say that I had placed the launch at his disposal, and to request that she might be put under the supervision of the Company's officers, for the above purposes. She was completely fitted, and delivered over to Mr. Birnie. The letters to Dr. M'Laughlin on this subject will be found in Appendix V. In consequence of my departure from the coast, I received no answer from him, but have understood from other sources that the boat had been taken charge of. Her construction was admirably adapted for that purpose, and I am sure that if any disaster should occur, the assistance she will render will be of great benefit.

On the 5th, the prospect of passing the bar was favourable, and at $2^h\ 30^m$ P. M. the Company's bark Columbia, which had been lying off and on for the last week, entered. On passing the vessels she saluted us, and proceeded up the river to Astoria. At $3^h\ 30^m$, I determined on making the attempt to get to sea. We quickly got the vessels under way, and in an hour afterwards we had passed the bar in safety.

The Cadborough followed our example, and went to sea also. Her master, before we got under way, had strong misgivings as to undertaking the risk at so late an hour both of the day and tide. The vessels of the Hudson Bay Company never attempt to pass either in or out, unless the opportunity is such as will warrant the master in making the attempt. They consider that there is sufficient risk at the best of times, and are unwilling to increase it. I have already stated that the entrance to the Columbia is impracticable for two-thirds of the year. This arises from the fact that it can never be entered at night, and in the day only at particular times of the tide and direction of the wind. Unlike all known ports, it requires both the tide and wind to be contrary, to insure any degree of safety. Those who may desire to be farther informed on this subject, are referred to the Hydrographical Memoir of the cruise.

Having succeeded in getting the brigs beyond the risk of detention, I gave them orders to await my return, and went on board the tender, to pass again into the river, for the purpose of completing all that remained of the survey. The Company's bark Columbia had just returned from the northern posts. The master, Mr. Broughton, was kind enough to give me much information respecting the northern coasts, and the Indian tribes: he likewise presented the Expedition with many curiosities of native workmanship, some of which showed much ingenuity, particularly their pipes and masks. The latter are used in their theatrical

exhibitions, which are represented by those who have witnessed them, as affording them much entertainment, and a pastime in which they very frequently indulge; many of these masks are represented with the spoon-lip. As this ornament belongs to the female sex, they also



MASKS OF THE NORTHWEST INDIANS.

engage in the diversion. Some of the masks are sufficiently hideous, while others are carved with skill: they use the soft pine for this purpose. The wood is variously stained with red, black, and yellow marks. The two of these represented in the engraving will give a good idea of those that are the best executed. The pipes, saucers, &c., are usually carved from clay.

PIPES OF THE NORTHWEST INDIANS.

The survey we finished by the morning of the 10th October, when we again reached Baker's Bay, and being determined to lose no time, we made the attempt to pass the bar: though we succeeded in doing so, I am satisfied it was at great risk; for, as I have been told is frequently the case, the wind failed us just at the most critical point, and rendered it doubtful if we should pass. Our situation was dangerous, and a vessel of any other class must have been wrecked. For at least twenty minutes I was in doubt whether we could effect our object; but by the use of sweeps we accomplished it, principally through the exertions of the extra men, belonging to the surveying boats, whom we had on board.

The Oregon was the only vessel in sight; and when I boarded her, I learned that they had not seen the Porpoise for three days. The next day she hove in sight, and the arrangements were soon completed.

I now supplied the tender with water and other requisites, and gave Mr. Knox orders to take a few more soundings on the outside of the bar, and then proceed along the coast as far as latitude 42° N., and to examine it, and the mouth of the Umpqua.

Previous to leaving the Columbia river, I addressed the following letter to Dr. M'Laughlin and Mr. Douglass.

U. S. Brig Porpoise,
Baker's Bay,
October 5th, 1841.

GENTLEMEN,—

My last duty, before leaving the Columbia, I feel to be that of expressing to you my sincere thanks for the important aid and facilities which you have afforded the Expedition on all occasions, for carrying out the object of our visit to this part of the world; and be assured it will prove a very pleasing part of my duty to make a due representation of it to my government.

Your personal kindness and friendly attentions to myself and officers, from our first arrival, and also to Captain Hudson and his officers after the wreck of the Peacock, have laid me under many obligations, which I trust it may be at some future day in our power to return.

We all would request through you an expression of your feelings for the many attentions and kindnesses received, and the pleasures afforded us by the officers of the Hudson Bay Company's service, with whom we have had any intercourse, which will be long remembered with pleasure.

With my sincere wishes for the health, happiness, and prosperity of yourselves and families, I am, very truly,

Your obedient servant,

CHARLES WILKES,
Commanding Exploring Expedition.

To JOHN M'LAUGHLIN and
JAMES DOUGLASS, ESQUIRES,
Chief Factors, H. B. C. Service, Vancouver.

At the same time, I wrote a letter to our government, informing them of the assistance we had received, stating the services these gentlemen had rendered us, and asking that an expression of acknowledgment might be made, through the British minister at Washington, to the Directors of the Hudson Bay Company in England.

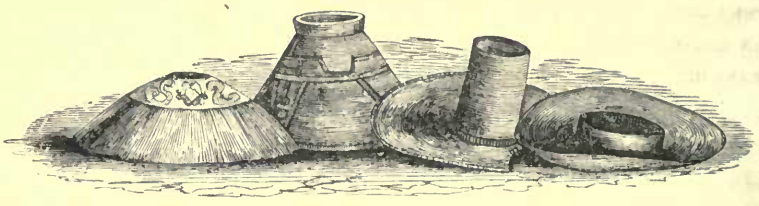
On the night of the 15th, we parted company with the Oregon, and did not see her again until she arrived at San Francisco. We coasted along to the southward, in the Porpoise. The land is high and mountainous, and may be seen at a great distance. Soundings of dark sand

are obtained, in from thirty to forty fathoms water, about fifteen or twenty miles from the land.

The coast south of the Columbia river I regretted we had not an opportunity more particularly to examine: the attempt of the Flying-Fish was unsuccessful; the season had advanced so far as to make it next to impossible to accomplish it in the manner I desired. I have no reason to doubt the correctness of the examinations that have been already made. No ports exist along any part of it, that are accessible to any class of vessels, even those of but very small draught of water; and the impediment that the constant and heavy surf offers, along the whole coast, to a landing in boats, makes this part of our territory comparatively valueless in a commercial point of view. Along a great part of it is an iron-bound shore, rising precipitately from the water. Anchorage in a few places may be had, but only in fair weather, and during the fine season. For a more particular description of the coast, I refer to the Hydrographical Memoir.

On the 18th, we made Cape de los Reyes and the Farallones. In the afternoon we were boarded by a boat from the Company's bark, Cowlitz, in which was her master, Mr. Brochier, and M. Duplot de Mofras. The latter informed me that he had just made a tour through Mexico and California, and was now going to the Columbia, for a passage to Oahu. The same evening, finding that I could not reach the port, I anchored in thirteen fathoms water.

On the 19th, we were under way as soon as the tide made, and at 3 P. M. we anchored near the Vincennes, in Sausalito Bay, on the north side of the entrance. I was gratified to find all well. Lieutenant-Commandant Ringgold reported to me that he had fulfilled the instructions relative to the Sacramento river. Nothing had yet been heard of Lieutenant Emmons; and the next day I despatched the launch up the river to meet his party. The Oregon came in during the afternoon, and I forthwith made such disposition of the officers and men, as I deemed the future wants of the service would require; this, and the operations of the Vincennes, will form the subject of the next chapter.



HATS, NORTHWEST COAST.

CHAPTER V.

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CHAPTER V.

CALIFORNIA.

1841.

After Lieutenant-Commandant Ringgold joined the Vincennes, she bore away for San Francisco, for the purpose of carrying into effect my instructions (see Appendix VI). She arrived at that port on the 14th of August, and anchored off Yerba Buena. Several vessels, amongst them two Americans, were found here, and intelligence was received of the death of General Harrison, President of the United States.

AUGUST 1841

As soon as the ship anchored, an officer was despatched on shore to call upon the authorities; but none of any description were to be found. The only magistrate, an alcalde, was absent. The frequency of revolutions in this country had caused a great change since the visit of Captain Beechey.

On the 17th, after consultation with the captain of the port, a Mr. Richardson, the ship was moved to the north shore, at Sausalito, or Whaler's Harbour. Water, which it was impossible to obtain at Yerba Buena, on account of the drought that had prevailed for several months, is here to be had from a small spring. After the ship was moored, the boats were hoisted out, and fitted for surveying duties up the river Sacramento.

On approaching the coast in the neighbourhood of San Francisco, the country has by no means an inviting aspect. To the north, it rises in a lofty range, whose highest point is known as the Table Hill, and forms an iron-bound coast from Punto de los Reyes to the mouth of the harbour.

To the south, there is an extended sandy beach, behind which rise the sand-hills of San Bruno, to a moderate height. There are no

symptoms of cultivation, nor is the land on either side fit for it; for in the former direction it is mountainous, in the latter sandy, and in both barren. The entrance to the harbour is striking: bold and rocky shores confine the rush of the tide, which bore us on and through a narrow passage into a large estuary: in this, several islands and rocks lie scattered around: some of the islands are clothed with vegetation to their very tops; others are barren and covered with guano, having an immense number of sea-fowls hovering over, around, and alighting upon them. The distant shores of the bay extend north and south far beyond the visible horizon, exhibiting one of the most spacious, and at the same time safest ports in the world. To the east rises a lofty inland range, known by the name of La Sierra, brilliant with all the beautiful tints that the atmosphere in this climate produces.

Yerba Buena is the usual though by no means the best anchorage. The town, as is stated, is not calculated to produce a favourable impression on a stranger. Its buildings may be counted, and consist of a large frame building, occupied by the agent of the Hudson Bay Company, a store, kept by Mr. Spears, an American, a billiard-room and bar, a poop cabin of a ship, occupied as a dwelling by Captain Hinckley, a blacksmith's shop, and some out-buildings. These, though few in number, are also far between. With these, I must not forget to enumerate an old dilapidated adobe building, which has a conspicuous position on the top of the hill overlooking the anchorage. When to this we add a sterile soil and hills of bare rock, it will be seen that Yerba Buena and the country around it are any thing but beautiful. This description holds good when the tide is high, but at low water it has for a foreground an extensive mud-flat, which does not add to the beauty of the view.

Although I was prepared for anarchy and confusion, I was surprised when I found a total absence of all government in California, and even its forms and ceremonies thrown aside.

After passing through the entrance, we were scarcely able to distinguish the Presidio; and had it not been for its solitary flag-staff, we could not have ascertained its situation. From this staff no flag floated; the building was deserted, the walls had fallen to decay, the guns were dismounted, and every thing around it lay in quiet. We were not even saluted by the stentorian lungs of some soldier, so customary in Spanish places, even after all political power as well as military and civil rule has fled. I afterwards learned that the Presidio was still a garrison in name, and that it had not been wholly abandoned; but the remnant of the troops stationed there consisted of no more than an officer and one soldier. I was not able to learn the rank

of the former, as he was absent, and appeared, at least among the foreigners, to be little known.

At Yerba Buena there was a similar absence of all authority. The only officer was the alcalde, who dwells at the mission of Nostra Señora de los Dolores, some three miles off. He was full of self-importance, making up for what he wanted in the eyes of others by a high estimate of his own dignity. I could find no one who could furnish me with his name, which must be my apology for not recording it in this place. Some excuse may be offered for his inattention to his duties, as I understood that he had just been united in wedlock to a lady of one of the distinguished families of the country; and after such an event in California much gaiety and rejoicing usually follow, until the hilarity at times becomes so uproarious as to end in fighting and bloodshed.

Under the Palermo Mountain, or Table Hill of Beechey, which is two thousand five hundred feet high, and sparsely wooded with a few gnarled and scraggy oaks, the hills open towards the bay into a kind of vale, which had been chosen for the position of the observatory, and where the instruments had been set up under the direction of Lieutenant Carr. This place is well adapted for the resort of whalers. Here they may repair their boats, obtain water, and refit; and from their frequent resort to it, has obtained the name of Whaler's Harbour. The cove is a safe anchorage, being protected from the northwest and westerly winds, which prevail during the summer season, and often blow with great violence.

At the time of our visit, the country altogether presented rather a singular appearance, owing, as I afterwards observed, to the withered vegetation and the ripened wild oats of the country. Instead of a lively green hue, it had generally a tint of a light straw-colour, showing an extreme want of moisture. The drought had continued for eleven months; the cattle were dying in the fields; and the first view of California was not calculated to make a favourable impression either of its beauty or fertility.

I found it very difficult to obtain accurate information in relation to Upper California. The country, at the time of our visit, and for several years previous, had been in a state of revolution; and, as is often the case under similar circumstances, was involved in anarchy and confusion, without laws or security of person and property. It is undergoing such frequent changes, that it is difficult to understand or to describe them.

With California is associated the idea of a fine climate, and a rich and productive soil. This, at least, was the idea with which I entered

its far-famed port; but I soon found, from the reports of the officers, after the trial they had had of it during the months of August and September, that their experience altogether contradicted the received opinion upon the first mentioned point. Many of them compared its climate to that of Orange Harbour, at Cape Horn, with its cold blustering winds and cloudy skies. This kind of weather prevails during the greater part of the year, and the comparison is literally true in relation to one portion of California—the sea-coast.

There is, perhaps, no other country where there is such a diversity of features, soil, and climate, as California. The surface exhibits the varieties of lofty ranges of mountains, confined valleys, and extensive plains. On the coast, a range of high land extends in length from Cape Mendocino to latitude 32° N., and in breadth into the interior from ten to twenty miles.

The valley of San Juan, of no great extent, lies between these hills and the Sierra, which is a low range of mountains. East of the Sierra is the broad valley of the Sacramento, which is prolonged to the south in that of Buena Ventura, as far as Mount San Bernardino, under the thirty-fourth parallel. Beyond this valley is the Californian Range. which is a continuation of the Cascade Range of Oregon, and whose southern summits are capped with snow. This range gradually decreases in height, until it declines into hills of moderate elevation. To the east of the Californian Mountains are the vast sandy plains, of which we know but little, except that they form a wide trackless waste, destitute of every thing that can fit it for the habitation of man or beast.

The soil is as variable as the face of the country. On the coast range of hills there is little to invite the agriculturist, except in some vales of no great extent. These hills are, however, admirably adapted for raising herds and flocks, and are at present the feeding-grounds of numerous deer, elk, &c., to which the short sweet grass and wild oats that are spread over them, afford a plentiful supply of food. No attempts have been made to cultivate the northern part of this section, nor is it susceptible of being the seat of any large agricultural operations.

The valley of the Sacramento, and that of San Juan, are the most fruitful parts of California, particularly the latter, which is capable of producing wheat, Indian corn, rye, oats, &c., with all the fruits of the temperate and many of the tropical climates. It likewise offers fine pasture-grounds for cattle. This region comprises a level plain, from fifteen to twenty miles in width, extending from the bay of San Francisco, beyond the mission of that name, north and south. This may be termed the garden of California; but although several small streams

and lakes serve to water it, yet in dry seasons or droughts, not only the crops but the herbage also suffers extremely, and the cattle are deprived of food.

The Sierra affords little scope for cultivation, being much broken, barren, and sandy. It is in places covered with cedar, pine, and oak; but it offers few inducements to the settler. The great valley of Buena Ventura next succeeds, which, although it offers more prospects of profitable cultivation, is by all accounts far inferior to that of San Juan. It lies nearly parallel to the latter, and is watered by the San Joachim river and its branches.

In this valley the Californian Indians principally dwell. The San Joachim receives its waters from the many streams that issue from the Californian range of mountains. These are well wooded, their base being covered with oaks, to which succeeds the red California cedar (Schubertia abertina), and after it, in a still higher region, pines, until the snows are encountered. On the eastern side of this range, there is found very little timber, and in consequence of the want of moisture, trees do not flourish, even on the west side. The inland plain, constituting a large part of Upper California, is, according to all accounts, an arid waste; the few rivers that exist being periodical, and losing themselves in the sandy soil.

Of the latter portion of country, however, there is little known, and the accounts given of it vary extensively. It has been crossed by seven persons, who differ altogether in respect to its appearance. One declared that the horses and men had not only a scanty supply of water, but were actually nearly famished for want of food; while others have found both grass and water plentiful. The only thing that can reconcile these contradictory statements is, that these different persons had visited the country at different seasons of the year. It seems not at all improbable that the first of these accounts should be the correct one, for we find great aridity throughout the rest of California, and Oregon also. All agree that the middle and extensive portion of this country is destitute of the requisites for supplying the wants of man.

In climate, California varies as much if not even more than in natural features and soil. On the coast range, it has as high a mean temperature in winter as in summer. The latter is in fact the coldest part of the year, owing to the constant prevalence of the northwest winds, which blow with the regularity of a monsoon, and are exceedingly cold, damp, and uncomfortable, rendering fire often necessary for comfort in midsummer. This is, however, but seldom resorted to, and many persons have informed me that they have suffered more

from cold at Monterey, than in places of a much higher latitude. The climate thirty miles from the coast undergoes a great change, and in no part of the world is there to be found a finer or more equable one than in the valley of San Juan. It more resembles that of Andalusia, in Spain, than any other, and none can be more salubrious. The cold winds of the coast have become warmed, and have lost their force and violence, though they retain their freshness and purity. This strip of country is that in which the far-famed missions have been established; and the accounts of these have led many to believe that the whole of Upper California was well adapted for agricultural uses. This is not the case, for the small district already pointed out is the only section of country where these advantages are to be found. This valley extends beyond the pueblo of San Juan, or to the eastward of Monterey: it is of no great extent, being about twenty miles long by twelve wide.

The Sierra, which separates the valley of San Juan from that of Buena Ventura, is about one thousand five hundred feet high, barren and sandy. Pines cover its summit, and the climate is exceedingly dry and arid, though cooled by the fresh wind that passes beyond them. Next comes the central valley of Buena Ventura, which is a continuation of the Sacramento, and through which the San Joachim flows. Being confined within the two ranges of mountains, and not having the same causes operating to modify the temperature as the smaller valley of San Juan, the heats of its summer are oppressive, the thermometer ranging, it is said, higher than within the torrid zone, and the heat continuing without cessation.

Although the Californian Range is covered with snow in close proximity to this valley, it seems to have but little effect in modifying the climate, which is represented as tropical throughout the year. This valley extends as far south as the San Bernardino Mountain. The residents in California say that they have never known the wind to blow from the northeast within thirty miles of the coast.

This state of things may also prevail in the interior, and will naturally prevent the cool stratum of air from descending into the valley, it being carried to the interior by the prevailing winds from an opposite quarter.

In ordinary seasons these valleys are well watered by streams from the mountains, which vary very much in size: they are for some part of the year mere brooks, while during the rainy season, from November to February, they become in some cases impassable. The Sacramento is the largest river in California. One of its branches, Destruction river, takes its rise near Mount Shaste, and was examined throughout

the whole of its course by our land party, until it joined the Sacramento: the latter is thought by some to pass through the mountains and join Pitt's river. Pitt's river is said to take its rise to the northeast of the Shaste Mountain, and from the information that I received, extends as far as Pitt's Lake, under the forty-second parallel. I have reason to doubt whether the length of its course is so great, and believe that the Sacramento has its source in the eastern spurs of the Shaste Mountain. I have, however, indicated by a dotted line on the map, the course Pitt's river is thought to pursue before it joins the Sacramento. This, if correct, would give the Sacramento, with its branches, a course of two hundred miles from the ocean.

The first branch of any size in descending the Sacramento is that called Feather river, which joins it below the Prairie Butes, coming from the northeast. This branch takes its rise in the California Mountains, near their northern end, and has a course of about forty miles. The American river is a small branch that joins the Sacramento at New Helvetia. After receiving this stream, the Sacramento is joined by the San Joachim, which courses from the south, and below their confluence enters the bay of San Pablo through the Straits of Kaquines, thence passing into the bay of San Francisco.

It is navigable for boats to the distance of one hundred and fifty miles, and for vessels as far as New Helvetia. The upper portion of it, near the Prairie Butes, overflows its banks, and submerges the whole of the Sacramento Valley as far down as the San Joachim. This inundation is probably caused by the united effects of the Sacramento and the Feather rivers, as there is not in its bed sufficient room to discharge so large a quantity of water. This valley will be presently spoken of in connexion with its survey.

The San Joachim does not pass through the Tula Lake, as laid down by Coulter; its sources are in the Californian Range. The Tula Lake is called by the Indians, Chintache Lake; it is for the most part separated from the channel of the river, but when full joins it.

There are many small streams that flow through the different valleys, and afford partial opportunites for irrigating the land; but there are none of them navigable, except the Sacramento.

Upper California may boast of one of the finest, if not the very best harbour in the world,—that of San Francisco, as before described. Few are more extensive or could be as readily defended as it; while the combined fleets of all the naval powers of Europe might moor in it. This is, however, the only really good harbour which this country possesses; for the others so called may be frequented only during the

fine season, being nothing more than roadsteads, affording little safety and but few supplies to vessels.

Among these bays are that of Monterey, the capital of Upper California, and that of Santa Barbara and San Pedro. The two last are partly protected from the swell of the Pacific Ocean by the islands that cover them. They are, however, but seldom used, there being comparatively little trade upon all this coast; for the hides and tallow which formerly abounded and made the business profitable for vessels, are no longer to be procured. The destruction of the missions, and the onerous laws, duties, and prohibitions, have nearly destroyed the little traffic that once existed, and it is now all transferred to the bay of San Francisco. There a few hulks may be seen lying, furnished with every needful article: these keep up an illicit intercourse by the connivance of the officers of the customs, by whose cupidity the revenue laws are openly infringed, and what of right belongs to the government, goes to enrich the governor and his officers.

The principal articles imported, are cotton cloths, velvet, silks, brandies, wines, teas, &c.; in return for which they receive hides and tallow, skins, wheat, and salmon. The attention of the inhabitants has been principally directed to the raising of cattle, and the greater part of the wealth of California may be considered as consisting of live-stock. The exportations, on the average of years, is about one hundred and fifty thousand hides, and two hundred thousand arrobas of tallow. The standard price for the former is two dollars, while the latter is worth one dollar and fifty cents the arroba. A few beaver-skins are obtained, which do not exceed two thousand, and are valued at two dollars apiece. From four to five hundred sea-otter skins are brought in by the American hunters, which are valued at thirty dollars each. Wheat has been exported to the Russian posts, to the amount of twelve thousand bushels, of which the average price is about fifty cents a bushel. Of late, however, it has risen to two dollars and fifty cents, in consequence of the great drought that has prevailed. Among the exports may be also enumerated about three thousand elk and deer skins, which are valued at from fifty cents to a dollar each. The whole merchantable products may be estimated at less than a million of dollars.

The yield of wheat is remarkable, and in some places, where the land is well situated, very large returns are received. Mr. Spears, of Yerba Buena, informed me that he had delivered to an active American farmer thirty bushels of wheat for seed, at a time when it was difficult to procure it, under an agreement that he should have the

refusal of the crop at the market price. In the July following, he delivered him three thousand bushels, and on its delivery, he found that the farmer had reserved six hundred bushels for himself; and this, without estimating the loss from bad reaping and treading out with horses, would give one hundred and twenty for one. This is not considered a fair criterion or average, as the land was remarkable for its richness and was well attended to; but Mr. Spears and several others assured me that the average would be as high as eighty bushels yielded for one planted.

Indian corn yields well, as also potatoes, beans, and peas. The cultivation of vegetables is increasing rapidly, and supplies in these latter articles may be had in abundance and of the finest quality.

The country appears to be well adapted for grapes. Those that have been tried at the missions yield most abundantly; and about two hundred casks, each of eighteen gallons, of brandy, and the same quantity of wine, are made. The cultivation of the grape increases yearly, but is not sufficient for the supply of the country, as large quantities of foreign wines and liquors are imported, which pay an enormous duty; and although California may not boast of its dense population, every intelligent person I met with agreed that it consumed more spirits in proportion than any other part of the world. Brandy sells for sixty to seventy dollars the cask, or four dollars a gallon, while the price of wine is only eighteen dollars. The wine of the country which I tasted is miserable stuff, and would scarcely be taken for the juice of the grape.

The salmon-fishery, if attended to, would be a source of considerable profit, yet I was told that the Californians never seem disposed to attempt to take them. The general opinion is, that they are too indolent to bestir themselves, and they naturally choose the employment which gives them the least trouble. Above every thing, the rearing of cattle requires the least labour in this country, for it is only necessary to provide keepers and have their cattle marked. This done, they can support themselves by the increase of the stock. At the missions, the manufacture of various coarse articles had been undertaken by the missionaries as a step in the education of the neophytes. Among these were blankets and wearing apparel sufficient to supply all the Indians; but, with the decline of these establishments, the manufactures have in great part been discontinued. Soap of a good quality is manufactured in considerable quantities, and it is thought that it might be exported at a profit, if the proper arrangements were made to use the grease that is now thrown away. The necessary alkali is very abundant. Leather of an excellent quality is also made and well tanned, but in

such small quantities as to be hardly sufficient to supply the wants of the country.

There are in California only two or three water-mills for grinding flour, and these are owned by foreigners. The mills in general use in the country, are composed of no more than two burr-stones. To the upper stone a cross-beam is secured, to which mule-power is applied. In most of the estancias there is to be found a mill in an apartment adjoining the kitchen, if not in it. The whole is as primitive as well can be, although I have no doubt it answers all the wants of this rude and indolent people.

From all accounts, besides cattle, the country is well adapted for the raising of sheep, which simply require watching, as they can find plenty of nutritious food the whole year round; but there has been no attention paid to this sort of stock, and the wool is of very ordinary quality. The mutton is thought to be of very fine flavour. The usual price for a sheep is from one dollar and fifty cents to two dollars, when a choice is made for killing.

Hogs are raised in some parts, and might be fed to great advantage on the acorns which are abundant on the hills where the land is not susceptible of cultivation. Pork may be packed at three dollars the hundred-weight. What adds to the facility of doing this business, is the fact that large quantities of salt collect in the ponds in the dry season, which may be obtained for the expense of carting it.

As respects trade, it may be said there is scarcely any, for it is so interrupted, and so much under the influence of the governor and the officers of the customs, that those attempting to carry on any under the forms usual elsewhere, would probably find it a losing business. Foreigners, however, contrive to evade this by keeping their vessels at anchor, and selling a large portion of their cargoes from on board. Great partiality is shown to those of them who have a full understanding with his excellency the governor; and from what I was given to understand, if this be not secured, the traders are liable to exactions and vexations without number. The enormous duties, often amounting to eighty per cent. ad valorem, cause much dissatisfaction on the part of the consumers: the whole amount raised is about two hundred thousand dollars per annum, which is found barely sufficient to pay the salaries of the officers, and defray the costs of the government feasts, which are frequent, and usually cost a thousand dollars each. These emoluments are shared among the heads of departments at Monterey, whilst the soldiers are often for months without their pay, and are made to take it in whatever currency it may suit the government to give. Besides the above duties, there is a municipal tax on many

things: thus, a dollar is demanded on every gallon of spirits imported; fifty cents on each beaver or otter skin, and on other articles in the same ratio. Next come the church tithes, which are enormous. I heard of a farmer who was made to pay one hundred and ninety dollars as the tithe on his produce, although he lives far removed from either church or priest. All these things are bringing the government into great disrepute, and the governor is every day becoming more and more unpopular; so much so, that his orders have not been complied with, and have been treated with contempt, particularly when he desires to recruit his forces. A short time before our arrival, he sent a list to a pueblo of the young men to be drafted as soldiers; when it was received, they in a body refused to go, and sent back the disrespectful and defying message, that he might come and take them.

Nothing can be in a worse state than the lower offices, such as the alcaldes, &c. They are now held by ignorant men, who have no ideas of justice, which is generally administered according to the alcalde's individual notions, as his feelings may be enlisted, or the standing of the parties. To recover a debt by legal means, is considered as beyond a possibility, and creditors must wait until the debtor is disposed to pay. Fortunately, and to the honour of the country, a just claim is rarely or never denied; and, until lately, the word of a Californian was sufficient to insure the payment of claims on him; but, such has been the moral degradation to which the people have fallen since the missions have been robbed by the authorities, and the old priests driven out, that no reliance can be placed now upon their promises, and all those who have of late trusted them, complain that engagements are not regarded, and that it is next to impossible to obtain any returns for goods that have been delivered. The state of the country is, however, some excuse, as it has been impossible for any one to make calculations under the existing anarchy and confusion.

It was at first believed that the revolution which took place in November 1836, would result in much immediate good to those who effected it; but such has not been the case. Foreigners unquestionably performed a large part in planning and carrying the change out; yet none have suffered so much by it as they have.

Much of this derangement of business has grown out of the state of the country for the last twenty years; and, although its history is of little importance, a succinct sketch of it may not be wholly devoid of interest. The facts are derived both from Californian and Mexican authorities, as well as from Americans; and, although the accounts frequently differ in some particulars, yet as to the main points they agree.

Previous to the year of the revolution by which California was separated from old Spain (1823), the whole country may be said to have been under the rule of the missions, and the padres who were at their head had acquired a vast influence over the Indians, as well as amongst the soldiery who were placed in the presidios as the guards and protectors of the missions. There were twenty-one missions, and only four presidios. The power of the governors was usually rather nominal than real, and the troops, from being totally neglected, were dependent upon the missions almost for their daily bread. Fortunately for the country, the padres and rulers of the missions were men well adapted for their calling: good managers, sincere Christians, they exerted a salutary influence over all in any way connected with them, practising at the same time the proper virtues of their calling, in order more effectually to inculcate them upon others. These reverend men were all old Spaniards, and greatly attached to their king and country. When the revolution broke out, they declined taking the oath to the new government: many, in consequence, left their missions and retired from the country, and some of the others have since died.

Thus, at the same time with a change of rulers, the country was deprived of the religious establishments upon which its society and good order were founded. Anarchy and confusion began to reign, and the want of authority was every where felt. Some of the missions were deserted; the property which had been amassed in them was dissipated, and the Indians turned off to seek their native wilds.

At the time of the separation from Spain, a Californian, by name Arguello, was governor. On his being appointed to that office, one Noniga, a Spanish officer, disliking to be commanded by a Californian, attempted to oppose him. In order to silence this opposition, Noniga was put in command of the presidio of Santa Barbara, where, owing to his misconduct, he was soon dismissed, upon which he again sought to excite the Mexicans against the Californians, and to impress them with the same deadly hatred which he himself felt. With this intent, he omitted no opportunity to represent the actions and conduct of the Californian authorities in the most odious light.

The government of Mexico saw the evils that they had occasioned, when it was too late, and set about remedying them, as well as to fill the vacancies that had occurred. For this purpose, they were disposed to consult the old padres, and offered those who remained, the choice of the northern or southern section, that they might be united in a body. The old Spanish priests chose the southern missions; and the few establishments which lie to the north of San Miguel, were assigned to those from the college of Xacatecas, in Mexico.

By this time the supreme government became convinced that although they had apparently adopted the best mode of palliating the injury the missions had received, yet it had served rather to increase the difficulty. The new Mexican priests were in every way inferior to the old Spaniards, neither possessing their intelligence, their skill in governing, their correct principles, nor their dignity of deportment; in short, they were totally unfit for their situation.

In 1825, the supreme government appointed Don Jose Echandia, a Mexican, to succeed Arguello as governor; and he gave universal satisfaction, till 1829, when a revolt took place among the Californians and Indians in the garrison of Monterey, in consequence of their not receiving the arrears of pay that were due them. The governor, with becoming energy, put down this disturbance, and restored order.

In 1831, Echandia was succeeded by Don Manuel Victoria, who changed the whole policy of his predecessor. He became at once, from his tyrannical conduct, extremely unpopular, and in the first year of his administration was so severely wounded in a skirmish at Los Angelos, as to be incapable of continuing in the command. The insurrection, of which this skirmish was an incident, was the most serious that had occurred. It owed its formidable character, as was believed, to the aid which the foreigners gave the Californians: this was the first time the former had interfered with the affairs of the country.

After this event, General Figueroa, who was sent to rule over Upper California, by his mild yet firm deportment, reconciled opinions, and put down all opposition. His administration is still spoken of as having been conducted with great ability and moderation. By his recommendation, the supreme government had sent out a colony of two hundred labourers and agriculturists, of which the country was much in want, to Monterey; but instead of their being what Figueroa had asked for, or such as was reported to have been sent, they turned out to be mere idlers, who had been living at the public expense. The arrival of this colony produced the most unhappy effects, and with them arose an enmity between the Californians and Mexicans, that has acquired additional acrimony from the favour shown the latter by the succeeding governors. Figueroa died in 1835, greatly regretted by all: his death proved a great loss to the country, for, had he lived, things would probably have turned out favourably.

Colonel Chico, the next in command, succeeded Figueroa, but was ill-suited for the situation, and the contrast between him and his predecessor was too perceptible for him to give satisfaction; his conduct towards the inhabitants tended to increase the unfavourable impressions he had first made. It was not long before a dispute arose between

him and the supreme judge of the district, upon the question as to which of them the chief authority belonged. Parties became very violent, and Chico determined to put down all opposition by military force. This course gave great dissatisfaction, and coupled with his arbitrary conduct towards the inhabitants and the missions, created a determination to resist him if he did not resign. A letter was written to him to that effect, upon which he felt himself compelled to deliver over the reins of government into the hands of a successor, to avoid the difficulties and dangers to which he would otherwise have been liable.

The next in command was Don Nicolas Gutierez, a lieutenant-colonel: under this officer tranquillity was apparently restored for a time.

During the preceding years, many foreigners had settled in California, who had taken a part in its affairs. These included natives of all countries; and among them were to be found Americans, who had led the lives of hunters and trappers, some of whom had been living in the Rocky Mountains, and on the Columbia river, whilst others had come from Mexico. These persons were naturally of a restless disposition, and disposed to engage in any thing that would produce excitement; bold and reckless in their disposition, they could not remain quiet under the turn things were taking in California, and they now joined and instigated the party opposed to the governor. They argued that California ought to form itself into a free state, by declaring its independence of Mexico, which had not the power to govern it. At that time any plausible arguments had weight with so ignorant a people as the Californians, and this idea was rendered acceptable by the ill-will they bore the Mexicans, and the obvious want of legitimate power. The project of overturning the government was also entertained by those who had previously held office, and particularly by the administrador of the customs, Ramierez, and Cosme Penné, a drunken lawyer, who was the assessor. They were both Mexicans by birth, and belonged to the ultra liberals. With them was joined the inspector, Alvarado, who was extremely popular with the foreigners. The two former, knowing the ignorance that prevailed among the Californians, constituted themselves leaders, and expected, in the event of any change, to be benefited by it; but at the same time they looked with some degree of mistrust and jealousy upon the foreigners resident there.

Under such circumstances, the least difficulty was sufficient to bring about a revolution, and it was not long before one occurred that caused an outbreak, and ended in the overthrow of the authorities. About the beginning of November 1836, a dispute arose between the governor

and Alvarado, the inspector of the customs, who was threatened with arrest. The popularity of Alvarado with the foreigners caused them at once to take a warm interest in his behalf; and, without inquiring into the right or wrong of the business, they espoused his cause. Alvarado fled to the country, and raised the standard of revolt in the pueblo of San Juan, some leagues from Monterey. The people of California being naturally lazy, ignorant, and indifferent, required some strong stimulus to arouse them; but this was effected, and in consequence of the dissoluteness of the priesthood, and the loss of clerical influence with the lower orders, which ten years of their bad management of the missions had brought about, they were quite unable to restrain the people. It has even been alleged that they favoured the design, in order to have a change, and avoid the heavy exactions that had been made upon them of late by the governor. Be this so or not, there was either no exertion made by the clergy in favour of the government, or their power was too insignificant to be effective.

The people were easily persuaded that a shameful misappropriation of public funds had taken place, and that the robbery of the missions was still going on. The discovery that Chico, who, as has been stated, was forced to resign in favour of the then governor, had defrauded the troops of their pay, and the missions of twenty thousand dollars, satisfied every one that such embezzlement was going on, and furnished a powerful incentive to many to join the standard of Alvarado. He was now acting under the advice and by the directions of the foreigners, who declared their intentions to be—1st. To hoist a new flag, and declare California independent of Mexico. 2d. To banish all Mexicans. 3d. That California should be declared an independent state; and 4th. That all foreigners then under arms, or who took part in the revolution, should be declared citizens. These declarations, although they had the desired effect, were evidently made rather to satisfy the foreigners than to please the natives, and are supposed to have emanated from the administrador Ramierez, and Penné. These men, the most able of the Californians, were desirous to make use of the foreigners to gain their own ends, in which they so far succeeded, that although the foreigners were, in regard to fighting, the prominent actors in the revolution, the result proved that they were but tools employed to gain the ulterior ends of these two designing persons.

Alvarado was now directed to move forward towards Monterey, which from all accounts he was of himself unwilling to do; but the directors of his movements impelled him forward. Who these were, is not well known; but the presumption is, that various citizens of the United States, as well as of England, advised and gave him promises

of aid. On the 2d of November, he arrived with his force at Monterey; it consisted of about two hundred men, of whom twenty-five were American hunters, the only part of his force that was effective. Some accounts give a smaller number, and state it at less than half of this. Gutierez, believing the Presidio impregnable, shut himself up in it with about one hundred and seventy persons, sixty of whom were regular soldiers.

The Presidio was at once invested, the beach taken possession of, and a communication opened with several American vessels then lying in the bay. The energy and activity exhibited by Alvarado's party indicated that their movements were directed by others than Spaniards or Californians.

Gutierez seems to have proved himself weak and imbecile in allowing these advantages to be obtained without making any endeavours to attack the insurgents. It is said, however, (and his actions certainly give some countenance to the idea,) that the dread in which the American hunters were held by himself and men, prevented his making any effective effort: in fact, their fame for skill in the use of the rifle was known and duly appreciated.

On the 3d, the insurgents were found to be in possession of some cannon, which they established on a neighbouring height, and were amply supplied with ammunition. As it was known that neither arms of this kind nor gunpowder were on shore, there is little doubt that they obtained them from the vessels in the bay; and those who were likely to reap the most advantage from a change in the administration of affairs, were suspected of aiding the insurgents with the means that rendered them, in point of equipment, superior to their adversaries.

On the 4th, Gutierez received an official letter, demanding the surrender of the Presidio and every thing in it. Previous to this, he had determined to resist until the last; but on inquiry, he found that various means had been used to win over the soldiers, who were already disaffected on account of the arrearages of pay due to them. To capitulate was now the only thing to be done; but it was necessary for him to call a council of his officers and deliberate upon the terms offered, or submit to the place being stormed. It is said that this council wore away the whole night, in propositions how they could avoid a surrender or obtain relief, without coming to any conclusion.

At dawn on the 5th, their hunter adversaries becoming impatient at the delay, fired an eighteen-pound ball, which struck the centre of the roof of the Presidio, directly over the apartment where the council

was held. This messenger brought them to a quick decision, and in a few minutes a flag of truce was sent out, surrendering unconditionally.

At ten o'clock, the deputation which had been appointed, consisting of Alvarado, Castro, and two ignorant Rancheros, marched in with their force, accompanied, it is said, by some American masters of vessels who were in port. Gutierez and his followers laid down their arms and accepted the stipulations; which were a guarantee of life to himself and officers, and that those who chose might either remain in the country or be suffered to depart. The Mexican flag was now hauled down; when the courage of Alvarado and the deputation failed them, and they refused to hoist the flag of California, which had been prepared for the occasion, and was then ready to be displayed, without first holding a council. This was supposed to be done through the advice of Ramierez and Cosme Penné, who now found that the affair had reached the point they desired, and that it was necessary to prevent any further act in favour of the foreigners. The council was accordingly held, and Miguel Ramierez and Cosme Penné were both allowed to be present. The four articles of declarations formally made, and that have been above recited, were read over for the purpose of being considered and adopted; when these two stated it was not according to their understanding of the plan agreed upon: that it was not to declare the country altogether free and independent of Mexico, but only until the constitution of 1824 should be established. Upon this, the members of the deputation, who were perfectly ignorant of their duties or business, simply answered: "Well, very well; it is just what we wanted: some persons who have longer heads than any of us to put us in the right way and help us better out of the scrape we have got into." Don Cosme immediately took advantage of this, and gave the watchword, "Viva California libre, y muerte a la centralism!"—upon which the Mexican flag was again hoisted. This produced much dissatisfaction among the foreigners, and the fear of them prevented Ramierez and Cosme Penné from going farther. In the selection of officers, Alvarado was nominated as governor, by Castro; General Vallejo, as commandant-general; Castro, as lieutenant-colonel of the militia; and the inebriate Cosme Penné, as secretary of state.

This proved satisfactory to the foreigners, although it was not what they wished: but the act removing one-half the duties was still more so.

It was soon determined that the Mexicans ought to be removed at once out of the country, notwithstanding the stipulations of the surrender to the contrary. Accordingly, the British brig Clementine was chartered, in which Gutierez and all his officers, with a large number

of his men, were embarked, and ordered to be landed at Cape San Lucas, the southern point of Lower California.

Thus in a few days were the authorities changed, without a single gun being fired but the one above spoken of, and without any blood-shed whatever. At the time of despatching the Clementine, Alvarado, with the advice of Cosme and Ramierez, purchased a small schooner, and sent her at once to a port in Mexico to inform the supreme government of every thing that had taken place, adding that they were willing to remain in allegiance, if they were allowed to choose their own officers. In the mean time they sent commissioners to demand that the other presidios should be given up, and that the inhabitants should acknowledge the authority of those who had overturned the government. This the officers and inhabitants refused to do, upon which Alvarado marched against Santa Barbara with his rancheros, for the hunters had, for the most part, left him. He was met by a superior force, commanded by a former deputy, named Castillo; but the schooner returned previous to hostilities being commenced, bringing not only a confirmation of the appointment of Alvarado and the others, but with a supply of arms, ammunition, and clothing for the troops, to the amount of ten thousand dollars. When this became known, Castillo and Alvarado became friends, the former acknowledging the authority of the latter, while Alvarado, it is said, took the oath of allegiance to the central government.

Alvarado now returned to Monterey, where, feeling himself more firmly established in his new office, and having been by this caprice of fortune raised above his deserts, he became arrogant to his countrymen, and alienated the foreigners by whom he had been assisted.

It will scarcely be necessary to say, that by this time the missions had lost all their control over the community. The government had seized upon their lands, and appointed an administrador to take charge of the property (which had been decided under an old Spanish law to belong to the government), as well as to rule over the Indians. From the priests were thus removed all further responsibilities and duties, except those strictly clerical. This act brought about the ruin of the missions. The moral and religious usefulness of the priests had been destroyed before, and now the property that was still left became a prey to the rapacity of the governor, the needy officers, and the administrador, who have well-nigh consumed all. Some of the missions, that had from forty to eighty thousand head of cattle, are now left with less than two thousand, and are literally going to ruin. They are no more what they once were, the pride of the padres, and the seat of the wealth and prosperity of the country. Moreover, this state of things

has left the whole community destitute of any moral guide whatever, and without any sort of religious observance, except by a few individuals past the middle age. Alvarado and General Vallejo have the reputation of being foremost in producing this state of things.

After a short time, it was found that the customs did not produce the required revenue; and the new government, fearing to tax the people and missions too openly, resorted to a renewal of the double duties, before more than two vessels had touched on the coast. Every day produced some restrictions upon the foreigners, who had now become estranged from the existing government that they had assisted to establish. Alvarado, finding his acts disapproved of by them, grew suspicious and jealous of their presence; for he well knew, from the manner of his own elevation, what an effective body they were

This state of things continued until the month of April, 1840, when Alvarado, anticipating an insurrectionary movement, and knowing the confidence that the aid of the foreigners would give the malcontent Californians, determined to rid the territory of them. For the purpose of obtaining some colour for the violence he intended, an Englishman, by the name of Gardner, was found, who deposed that all the foreigners, from San Francisco to San Diego, or from one extreme of California to the other, a distance of six or seven hundred miles, had conspired to murder the governor and take possession of the country: that an American, by the name of Graham, a trapper from the state of Kentucky, was their leader; and that they were to rendezvous, for the purpose, at Nativetes, the residence of Graham. Colonel Castro was accordingly sent thither, with the prefect, two inferior officers, and fifteen armed soldiers. They proceeded to Nativetes, which is about twenty miles from Monterey; but, as they well knew that Graham was a resolute, strong, and brave man, it was necessary to take great precautions. They therefore chose midnight for their attack, at which hour they reached his farm. On their arrival they forced open the door, and at once fired a volley into the bed where he lay asleep, and so close to it that they set fire to his blankets. Graham was wounded in several places, and badly burnt.

On being thus awakened, he attempted to defend himself, but was overpowered by numbers, inhumanly beaten, and then tied hand and foot. A working-man, who attended the cattle with him, by the name of Shard, also an American, was held down by two men while a third deliberately cut the tendons of his legs with a butcher's knife, and left him to die. Graham was then tied upon a horse, and carried to Monterey, where he was loaded with irons, and placed in a filthy cell:—torn from the property he had accumulated, amounting to four

or five thousand dollars in specie, and about ten thousand dollars in cattle, which he had reared and bought, through his own industry: this, it is supposed, fell into the hands of the governor, who was much in want of funds at the time, and could conceive of no way by which his coffers could be so readily replenished as by such a wholesale robbery.

After the arrest of Graham, more than sixty foreigners were taken up immediately, put into irons, and cast into prison with him. At the same time, orders were issued to apprehend every foreigner found upon the coast, and in case of their not giving bonds for their appearance, they were to be thrust into prison.

Forty-seven of these men were embarked in a vessel called the Guipuzcoa, loaded with irons, nearly half of whom are said to have been citizens of the United States. One of these died from the treatment he received; and the hardships they were obliged to undergo on their journey to Tepic, are almost past belief.

The Guipuzcoa was eleven days on her passage to San Blas, during which time the prisoners were kept in the hold of this small vessel, without light or air, and endured every description of ill treatment. On their arrival at San Blas, they were landed without delay, and immediately marched, in the short space of two days, to Tepic, a distance of sixty miles.

The thermometer was at 90°; the road was mountainous and rough; they were barefooted, heavily ironed, and without any food, except what was given them from charity. They were urged forward by lashes inflicted on their naked bodies, and one who sank under the fatigue was severely beaten with the but-end of a musket.

At Tepic, they found in the English and American consuls kind friends, who exerted themselves to relieve their wants, and finally, through their remonstrances, and those of the English and American ministers, they were allowed to return to California; and orders were given that they should produce certificates of their losses, and be paid for them. All the Englishmen have returned, with every necessary document to establish their claims, and obtain redress for their wrongs; but on the part of the Americans, this is far from being the case. Of them none but Graham have returned, and he is broken both in health and spirits. What remuneration he has received, I did not learn; but the French and English have all obtained indemnity, through the attention their governments have paid to their wrongs. Ours alone has failed in the prompt protection of its citizens; and many complaints are made by our countrymen abroad that the government at home seems to have very little regard for their lives or property.

It would appear by this want of attention on the part of our government, that it had not been fully satisfied that the conduct of its citizens had been correct; at least, that is the feeling among them abroad. I have little testimony on this subject, except the protestations of many of those who have been more or less suspected of taking part in the expected revolt. I can say, that all the accounts I received invariably spoke of the foreigners as having had nothing to do with the intended outbreak, even if it were organized; and every one should be satisfied that they were innocent, by the fact that in Mexico they were all adjudged to be entirely guiltless of the charges brought against them, and that they were sent back at the expense of the Mexican government, with letters of security, and an order making it obligatory on the Governor of California to assist them in procuring evidence of the damages they had sustained. Although this may have been ample satisfaction, so far as mere remuneration goes, yet for the barbarous conduct shown to them by the authorities, some punishment ought to have been inflicted, and an example made. But such has not been the case, and those officers are still kept in their high places, with the power to repeat like barbarities. There is no other way to account for this not being insisted upon, than by supposing that the Mexicans hold so little authority over this territory as to make them extremely scrupulous how they take any measures that may cause the dismemberment of the state, and the loss of even the nominal dominion they now possess.

The situation of Upper California will cause its separation from Mexico before many years. The country between it and Mexico can never be any thing but a barren waste, which precludes all intercourse except that by sea, always more or less interrupted by the course of the winds, and the unhealthfulness of the lower or seaport towns of Mexico. It is very probable that this country will become united with Oregon, with which it will perhaps form a state that is destined to control the destinies of the Pacific. This future state is admirably situated to become a powerful maritime nation, with two of the finest ports in the world,—that within the straits of Juan de Fuca, and San Francisco. These two regions have, in fact, within themselves every thing to make them increase, and keep up an intercourse with the whole of Polynesia, as well as the countries of South America on the one side, and China, the Philippines, New Holland, and New Zealand, on the other. Among the latter, before many years, may be included Japan. Such various climates will furnish the materials for a beneficial interchange of products, and an intercourse that must, in time, become immense; while this western coast, enjoying a climate

in many respects superior to any other in the Pacific, possessed as it must be by the Anglo-Norman race, and having none to enter into rivalry with it but the indolent inhabitants of warm climates, is evidently destined to fill a large space in the world's future history.

Although I have already spoken of the Indians, yet in order to make the state of the country fully understood, it is necessary to explain their former connexion with the missions, as well as their present condition.

The Indians who were brought into the fold of the missions, were either induced through persuasion, by force, or enticed by presents: the agreement, or rather law, was, that they should be converted to Christianity; and for this benefit conferred upon them, they were to give ten years' faithful service, after which time they were to be at liberty, and to have allotted to them a small piece of land for cultivation, and a few cattle, provided they could get the security of any respectable person for their good behaviour. This seldom happened; but their treatment was much more kind after the expiration of their term of service, and they usually remained in the employ of the missions, having become attached to their masters and occupations. These chiefly consisted in taking care of cattle, the work of the farm, gardening, and household duties. Some became carpenters and blacksmiths; others weavers, shoemakers, and manufacturers of leather; and some were let out to private service to "gente de razon," or people of reason, as the whites are termed. The police of the missions was strict, and punishment was administered when required; but then rewards for good behaviour were also given, as well as for bringing in neophytes. In the latter way, it is said that the missions were usually recruited.

During the troubles of 1836, the Indians of many of the missions were cast off neglected, and in fact deprived of the proceeds of their labour. They had reason to believe, as had been impressed upon them by the Spanish padres, that they were interested in the proceeds and wealth that had been accumulated by their labour; and this belief had naturally tended to attach them to the soil.

The ravages of the small-pox, two years prior to our visit, completed the destruction of these establishments; for it swept off one-half of the Indians, and served to dispirit the rest. Many of them have joined the wild Indians, and are now committing acts of violence on the whites; they are becoming daily more daring, and have rendered a residence in single farm-houses or estancias not without danger. In looking at the state in which these poor Indians have been left, it cannot be denied but that they have cause to be dissatisfied with the treatment they have received.

Every mission was regarded as a separate family of Indians, and

some of these included twelve hundred individuals. During the management of the Spanish priests, every thing was judiciously conducted: the Indians were well dressed, well fed, and happy; out of their earnings the priests were able to buy annually ten thousand dollars' worth of articles for their wants and gratification, from the vessels trading upon the coast. Each mission formed a body politic of itself, having its own alcalde, inferior officers, &c., and every thing went on prosperously. The Indians, though at first disinclined to work, soon became industrious, when they found the benefits and advantages that accrued to themselves, and became converts to Christianity, so far as forms went, in order to entitle them to its presents. It is not surprising that a rapid increase of wealth took place, considering the number of labourers in the field, added to a rich soil and fine climate.

As has been before stated, in 1835, orders from the supreme government were issued, administradors were appointed to each mission, and the priests were deprived of their sway, leaving them only their clerical duties to attend to, with a small stipend. So far as they were personally concerned, this was deserved; for, with but one or two exceptions, their lives were entirely opposite to what they ought to have been; they were openly and publicly dissolute. The administradors have made themselves and those by whom they were appointed, rich upon the spoils of these missions; and so great have been the drafts upon some of these missions, that they have not been able to support their neophytes. The mission of San Jose, for instance, during the year of our visit, was obliged to order off five hundred of its proselytes, to procure their subsistence as they best could. These acts seem to be committed without any kind of consideration, or idea that there is any injustice practised: the property acquired by the missions is looked upon as belonging to the state; the claims of the Indians are entirely overlooked, and in the event of their taking the cattle that in truth belong to them, they are severely punished. This naturally irritates them, for not only can they perceive the injustice of others appropriating the fruits of their labour, but are exasperated by seeing them living upon the common stock, while they are obliged to seek a precarious subsistence in the forest.

In consequence of this state of things, depredations are continually committed by the Indians; and, a month previous to the arrival of the squadron, they had driven off three hundred horses. Retaliatory measures on the part of the Californians were adopted; a party was collected and despatched to punish them, which proceeded towards the interior, came to a village, and without any inquiry whether its dwellers had been the aggressors, it was set on fire, and reduced to

ashes; some of the defenceless old men, who from their infirmities could not escape, were put to death, and forty or fifty women and children carried off as prisoners. This was not all: these prisoners were apportioned as slaves to various families, with whom they still remain in servitude, and receive very harsh treatment. Smarting under such wrongs, it is not surprising that the Indians should retaliate. They openly assert that after taking all the horses, they will commence with families; and many of those which are situated on the frontiers, experience much alarm. In June 1841, an Englishman was shot by an arrow at the door of his house, early in the evening. The Indians enticed him out by making a noise near by, and the moment he opened the door, with a candle in his hand, an arrow was sent through his heart.

The Indians at present rarely steal any thing but horses; but so daring are they, that they not unfrequently take them out of the enclosures near the pueblos. Their reason for confining themselves to this description of property is, that with them they are able to avoid pursuit, which would not be the case if they took cattle. The Californians, on detecting and apprehending the aggressors, show them no mercy, and their lives are made the forfeit. This constant foray on one side or the other keeps up a continual embitterment, and as long as the present imbecile government lasts, this state of things must every day grow worse, and will undoubtedly tend to affect the value of property, as well as to prevent immigration, and settlement in the country.

To all strangers but those of the Spanish race, the Indians seem in general well disposed, as they have usually received from the former considerate and kind treatment. The character of these Indians is not represented as savage, and they were little disposed to trouble the whites until they had been themselves ejected from the missions, and forced to consort with those who are yet in a wild state. The knowledge they have of the Californians, of the missionary establishments, and the manner of conducting them, enables them to act more effectively; and if it were not for the presence of the English and Americans, they would either drive the Spanish race out of the country, or confine them to the narrow limits of their villages.

The number of Indians is variously stated, at from twelve to fifteen thousand; but it is believed by some of the best informed, that their number, since the small-pox made its ravages among them, is not much more than one-half of this number, or eight or nine thousand. The principal part of these are the tribes on the Sacramento.

In like manner, there has been an exaggeration in the computation

of the number of the whites, or gente de razon. These have been usually estimated at five thousand; but, from the best information, I could not satisfy myself that they number more than three thousand souls. In this estimate is not included those of mixed blood, who may amount to two thousand more; so that in the whole of Upper California, at the date of our visit, the entire population was about fifteen thousand souls; and this estimate cannot be far from the truth.

The health and robustness of the white inhabitants seem remarkable, and must be attributed to the fine climate, as well as to their simple diet. This consists of beef roasted upon the coals, a few vegetables, and the tortilla, which is a thin cake, made of corn-meal, and baked upon a sheet of iron. Throughout the country, both with the rich and poor, this is the general fare; but some few luxuries have been lately introduced, among which are rice and tea. The latter is used so sparingly, that the discoloration of the water is scarcely perceptible. At the missions they live more after the Spanish fashion. The children are, for the most part, left to take care of themselves, and run about naked and dirty. They are generally robust, and their relative number seems to be very great; thus, it is by no means uncommon to see families of fourteen or fifteen children; and an instance was mentioned to me of a woman near Yerba Buena, who had had twenty-six. A large number die from accidental falls from horses, with which from their earliest childhood they are accustomed to be engaged. They early become expert and fearless riders, and this skill is not confined altogether to the male sex; the women are almost equally expert. Families with numerous members are seldom met with who have not had to mourn the loss of several of their number from casualties of this sort.

Although the Californians are comparatively few in number, yet they have a distinctive character. Descended from the old Spaniards, they are unfortunately found to have all their vices, without a proper share of their virtues; they are exceedingly fond of gambling, which is equally in favour with the male and female portion of the community. Their games consist in cards, dice, &c.

Their amusements are cock-fighting, bull and bear-baiting, and dancing; these are the predominant occupations of their lives, always accompanied with excessive drinking. Parties of amusement, to which the surrounding population is invited, are frequent; these generally last for three days, and rarely break up without some quarrel. Weddings are particularly liable to these disorders, and at each of the three last that took place at and in the vicinity of Yerba Buena, previous to our

visit there, a life was lost by the cuchillo. This weapon is always worn, and is promptly resorted to in all their quarrels.

The female portion of the community are ignorant, degraded, and the slaves of their husbands. They are very fond of dress, and will make any sacrifice, even their own honour, to gratify it. The men have no trades, and depend for every thing upon the Indians at the missions, some of whom are quite ingenious, both as carpenters and blacksmiths. The whites are so indolent, and withal have so much pride, as to make them look upon all manual labour as degrading; in truth, they regard all those who work as beneath them; they, in consequence, can never be induced to labour. An anecdote was related to me of one who had been known to dispense with his dinner, although the food was but a few yards off, because the Indian was not at hand to bring it to him.

The state of morals here is very low, and is every day becoming worse. During the residence of the old Spanish priests, the people were kept under some control; but since the change I have narrated, priest and layman are alike given up to idleness and debauchery. One thing they are said to be remarkable for, which is their extreme hospitality: it is alleged that they will give up all business to entertain a guest. They put no value whatever upon time, and in entering into contracts they have no regard to punctuality, frequently allowing two, three, and four years to pass by before payment. This does not proceed from dishonesty, or any intention to evade their debts, for eventually they pay, if they can, and do not object to the amount of interest. They in fact regard the inconvenience to which they may have put their creditors as of no sort of consequence.

I understood that to offer money for entertainment was considered as an insult; but I did it notwithstanding, and although it was refused from myself, yet, when made through my servant, it was readily accepted. While one is entertained by them, if he should want to hire or purchase any thing, the landlord will league with those about him in schemes of extortion to be practised upon the stranger, and appear vexed with those who are the prominent extortioners. Instances of this will be given hereafter.

The Californians, as a people, must be termed cruel in their treatment to their wives, as well as to the Indians; and in a still greater degree, of course, to their slaves and cattle. They are exceedingly ignorant of every thing but extortion, riding horses, and catching bullocks.

Having thus thrown together the general information I was able to

procure, I shall proceed to speak more particularly of our operations in the country, and intercourse with the inhabitants.

On the 20th of August, Lieutenant-Commandant Ringgold left the Vincennes with six boats, accompanied by Dr. Pickering, Lieutenants Alden and Budd, Passed Midshipman Sandford, Midshipmen Hammersly and Elliott, and Gunner Williamson, with provisions for thirty days, accompanied by an Indian pilot. They first passed the islands of Angelos and Molate, next the points of San Pedro and San Pablo, and then entered the bay of San Pablo.

This bay is of a form nearly circular, and ten miles in diameter; many small streams enter it on all sides, from the neighbouring hills. On the east side of this bay, the river Sacramento empties into it through the Straits of Kaquines. The land is high, and the sandstone rock on each side of the straits resembles that seen about the Straits of De Fuca. The hills are thickly covered with wild oats, which were ripe, and the landscape had that peculiar golden hue before remarked. The contrast of this with the dark green foliage of the scattered oaks, heightens the effect, which, although peculiar, is not unpleasing to the sight. The trees all have an inclination towards the southeast, showing the prevalence and violence of the bleak northwest winds, producing on them a gnarled and mountain character. This feature is general throughout the coast of California, and gives the trees a singular appearance, the flat tops having the air of being cut or trimmed after the manner of box trees. The tops are bent to one side, and the larger branches hidden by the numerous twigs which compose the mass. The only place where a similar character was observed by us impressed upon the foliage, was at Terra del Fuego.

After passing the straits, the delta of the Sacramento opened to view. The Tula marshes, which are overflowed by the river above, are very extensive, and are said to be the resort of a vast number of beavers, which, in consequence of the nature of the ground, are difficult to catch, many more traps being necessary than in other localities.

The party took the southeast arm of the Sacramento, and proceeded up the stream for the distance of three miles, where they encamped, without water, that of the river being still brackish. The soil was hard, from being sunburnt, and the foot-marks of the cattle, which had been made during the last rainy season, still remained.

In the morning, they discovered that they had taken the wrong branch of the river, for this led immediately into the San Joachim. They, in consequence, returned to the entrance, where they began their survey. On the 23d, they reached the residence of Captain Suter, and encamped on the opposite bank.

Captain Suter is a Swiss by birth, and informed them that he had been a lieutenant in the Swiss guards during the time of Charles X. Soon after the revolution of July, he came to the United States, and passed several years in the state of Missouri. He has but recently removed to California, where he has obtained from the government a conditional grant of thirty leagues square, bounded by the Sacramento on the west, and extending as far up the river as the Prairie Butes. The spot he has chosen for the erection of his dwelling and fortification, he has called New Helvetia; it is situated on the summit of a small knoll, rising from the level prairie, two miles from the east bank of the Sacramento, and fifty miles from its mouth. New Helvetia is bounded on the north by the American Fork, a small serpentine stream, which has a course of but a few miles. This river, having a bar near its mouth, no vessels larger than boats can enter it. At this place the Sacramento is eight hundred feet wide, and this may be termed the head of its navigation during the dry season, or the stage of low water.

Mr. Geiger, a young American from Newport, is now attached to Captain Suter's establishment; but he informed me that he intended to settle higher up the Sacramento, on the banks of the Feather river. When Captain Suter first settled here in 1839, he was surrounded by some of the most hostile tribes of Indians on the river; but by his energy and management, with the aid of a small party of trappers, has thus far prevented opposition to his plans. He has even succeeded in winning the good-will of the Indians, who are now labouring for him in building houses, and a line of wall, to protect him against the inroads or attacks that he apprehends, more from the present authorities of the land, than from the tribes about him, who are now working in his employ. He holds, by appointment of the government, the office of administrador, and has, according to his own belief, supreme power in his own district, condemning, acquitting, and punishing, as well as marrying and burying those who are under him. He treats the Indians very kindly, and pays them well for their services in trapping and working for him. His object is to attach them, as much as possible, to his interests, that in case of need he may rely upon their chiefs for assistance.

Although Captain Suter is, in general, in the habit of treating the Indians with kindness, yet he related to our gentlemen instances in which he had been obliged to fusilade nine of them; indeed, he does not seem to stand upon much ceremony with those who oppose him in any way. His buildings consist of extensive currals and dwelling-houses, for himself and people, all built of adobes. Labour is paid for

in goods. The extent of his stock amounts to about one thousand horses, two thousand five hundred cattle, and about one thousand sheep, many of which are now to be seen around his premises, giving them an appearance of civilization.

Captain Suter has commenced extensive operations in farming; but in the year of our visit the drought had affected him, as well as others, and ruined all his crops. About forty Indians were at work for him, whom he had taught to make adobes. The agreement for their services is usually made with their chiefs, and in this way, as many as are wanted are readily obtained. These chiefs have far more authority over their tribes than those we had seen to the north; and in the opinion of an intelligent American, they have more power over and are more respected by their tribes than those of any other North American Indians. Connected with the establishment, Captain Suter has erected a distillery, in which he makes a kind of pisco from the wild grape of the country.

The duties I have already named might be thought enough for the supervision of one person; but to these must be added the direction of a large party of trappers and hunters, mostly American, who enter here into competition with those of the Hudson Bay Company; and attention to the property of the Russian establishment at Ross and Bodega, which had just been transferred to him for the consideration of thirty thousand dollars. In the purchase were included all the stock, houses, arms, utensils, and cattle, belonging to the establishment. It was understood that this post was abandoned, by orders of the Russian government, the Russian Company no longer having any necessity to hold it to procure supplies, as they are now to be furnished under a contract with the Hudson Bay Company; and by giving it up, they avoid many heavy expenses.

Bodega was first established by the Russians in 1812, under a permission of the then governor of Monterey, to erect a few small huts for salting their beef. A small number of men were left to superintend this business, which in a few years increased, until the place became of such importance in the eyes of the Spanish authorities, that on the Russians attempting to establish themselves at San Francisco,* they were ordered to leave the country. This they refused to do, and having become too strong to be removed by the Spanish force, they had been suffered to remain undisturbed until the time of our visit.

The port of Bodega is situated about ninety miles to the north of that of San Francisco, and being both inconvenient and small, cannot be

* On the island of Yerba Buena, and to employ their men in trapping during the season.

entered except by vessels of a small draft of water. From what I understood from the officers who had been in charge of it, it had been a very considerable expense to the Russian American Company to fortify it; and the disposal of the whole, on almost any terms, must have been advantageous. Captain Suter had commenced removing the stock and transporting the guns, &c., to his establishment.

The buildings at the two posts numbered from fifty to sixty, and they frequently contained a population of four or five hundred souls. Since the breaking up of the establishment, the majority of the Russians returned to Sitka; the rest have remained in the employ of the present owner.

During our stay, there was much apprehension on the part of some that the present governor of the district next west of New Helvetia, felt jealous of the power and influence that Captain Suter was obtaining in the country; and it was thought that had it not been for the force which the latter could bring to oppose any attempt to dislodge him, it would have been tried. In the mean time Captain Suter is using all his energies to render himself impregnable.

In his manners, Captain Suter is frank and prepossessing; he has much intelligence, is conversant with several languages, and withal not a little enthusiastic: he generally wears a kind of undress uniform, with his side-arms buckled around him. He has a wife and daughter whom he expects soon to join him.

New Helvetia was found to be in latitude 38° 33′ 45″ N., and longitude 121° 40′ 05″ W.

According to this gentleman, there are nine different tribes of Indians that are now in his neighbourhood, and within a short distance of his territory.

In the evening our party were favoured with a dance by Indian boys, who, before they began, ornamented themselves with white masks, and decked their bodies each according to his own taste. The music was vocal, and several joined in the song. Their motions were thought to resemble the Pawnees' mode of dancing. Their music was more in harmony than among the other tribes we had seen; neither has their language any of the harsh guttural sounds found in those of the Oregon Indians. Every word of their language appears to terminate with a vowel, after the manner of the Polynesian dialects, which gives their voices much more softness than the tribes to the north, to whom they have no resemblance whatever, though they are said to be somewhat like the Shoshones.

They wear fillets of leaves around their heads, and often tie on them a piece of cotton, after the manner of the Polynesians. These Indians

do not build canoes, although they admire and prize them highly; they are excellent swimmers, and in consequence of it do not need them in their narrow streams; they, however, make use of simple rafts, composed of one or two logs, generally split.

The venereal disease is said to prevail to a great extent among them; and whole tribes have been swept off by the small-pox. The former is said to have been communicated by the Indians who have been discharged from the mission. All agree that the Indians have been very unjustly treated by the governor. Cattle that had been given to them by the padres of the mission when they left it, have been taken away from them by this functionary, and added to his own stock—whence a saying has been derived, that the governor's cows produce three times a year. The Spanish laws do not recognise the Indian title to lands, but consider them and the Indians also in the light of public property.

Although the country around was parched up with the severe drought that had prevailed, yet the short grasses were abundant, and it was more completely covered with vegetation than that below. Scattered oaks are seen in all directions, some of which are of large dimensions,—five or six feet in diameter, and sixty or seventy feet high.

The scenery was very much admired, and Mount Diavolo, near the mouth of the San Joachim, adds to its beauty. The mountains to the east are visible from Captain Suter's settlement, and it is said that during some portions of the year they are covered with snow. A route across them was followed, directly east of this place, by a party, but they were twenty days in getting over, and found the country so thickly wooded that they were obliged to cut their way. The pass which is recommended as better, is two hundred miles to the north of this place, through the gap made by the head waters of the Sacramento. This has led to the belief that Pitt's river extends in this direction through and beyond them.

The best route to the United States is to follow the San Joachim for sixty miles, thence easterly, through a gap in the Snowy Mountains, by a good beaten road; thence the course is northeasterly to Mary's river, which flows southeast and has no outlet, but loses itself in a lake; thence continuing in the same direction, the Portneuf river, in the Upper Shoshone, is reached; and thence to Fort Hall. According to Dr. Marsh, (an American of much intelligence, resident at the mouth of the San Joachim, to whom we are indebted for much information of the country,) there is plenty of fresh water and pasturage all the way, and no proper desert between the Californian Range and the Colorado.

Dr. Marsh crossed nothing like a range of mountains in the whole route from the United States. Hills and mountains were often seen on what he calls the table-land of New Mexico. The most common plant met with was an acacia, a small shrub which is also to be found in the southern parts of New Mexico, where the climate is likewise very arid. In one district where it occurs, it is found necessary to protect both horse and rider with a sort of armour against this rigid and thorny vegetation, between latitude 37° and 38° N.

He also reports that there are other streams to the east of the mountains without outlets, and which do not reach the Colorado, although running in that direction. He identifies the Youta, or great Salt Lake, with the Lake Timponogos of the early Spanish fathers who visited it, and agrees with others in placing the north end of it nearly in the parallel of 42° N.

The Colorado he reports to be impracticable for boats to descend from the head waters to its mouth, on account of its rapidity. There is one place in it that is described as similar to the Dalles of the Columbia, which is supposed to be where it passes through the range of mountains.

The banks of the river are bordered with marshes, which extend for miles back. This kind of country continues up both the Sacramento and San Joachim, and is the proper Tula district of which so much has been said, and so many errors propagated. Here the tula (Scirpus lacustris) grows in great luxuriance.

On the 25th, the boats left New Helvetia. It was discovered, previous to starting, that four men had deserted from their party. This is a common circumstance in this port, and very few vessels visit it without losing some portion of their crews. The dissolute habits of the people form such strong temptations for sailors, that few can resist them. A number of men who were deserters were continually around us. Among others, the sergeant and marine guard that had deserted from H. B. M. ship Sulphur were the most troublesome. Their appearance did not prove that they had changed their situation for the better.

Ten miles up the river, a sand-bar occurred, over which it was found that the launch could not pass. Lieutenant-Commandant Ringgold therefore left her at this place, under charge of Mr. Williams, taking sufficient provisions in the boats. The oaks became more scattered, and the soil thickly covered with vegetation, although parched up by continued drought.

On the 26th, they reached the mouth of Feather river, which is fifteen miles above New Helvetia. It appeared nearly as broad as the

main stream, but there is a bar extending the whole distance across it, on which the boats grounded. On the point of the fork, the ground was strewed with the skulls and bones of an Indian tribe, all of whom are said to have died, within a few years, of the tertian fever, and to have nearly become extinct in consequence. Near this had been an Indian village, which was destroyed by Captain Suter and his trappers, because its inhabitants had stolen cattle, &c. The affair resulted in one of the Indians being killed, twenty-seven made captive, and the removal of the remainder beyond the limits of his territory. The battle-ground was pointed out, at a bend of the river, which is only one-third of a mile across, though three around. Above the junction of the two rivers, the Sacramento becomes sensibly diminished.

Game is represented to have decreased in this vicinity, from the numbers destroyed by the parties of the Hudson Bay Company, who annually frequent these grounds. Large flocks of curlew were seen around; and the California quail, which disappeared since leaving the coast, was again seen. The trees that line the banks consist of the cotton-wood, &c. Single oaks, with short grass beneath them, are scattered over the plain.

The next day, as they advanced, game became more plentiful, and elk were found to be most so. Some of them were of large size, and at this season of the year, the rutting, they are seen generally in pairs; but at other times, the females are in large herds. They are fine-looking animals, with very large antlers, and seemed, in the first instance, devoid of fear. The herds are usually thirty to forty in number, and are chiefly composed of females and their young. The father of the flock is always conspicuous, and with his horns seemed to overshadow and protect the family.

The tula or bulrush was still found in great quantities, growing on the banks. The Indians use its roots as food, either raw, or mixed with the grass seed, which forms the principal article of their food. This root is likewise eaten by the grisly bear.

At the encamping-place was a grove of poplars of large size, some of which were seventy feet high, and two and a half feet in diameter. The leaf resembled that of the American aspen. At night they had a slight thunder-shower. The wolves and bears had entered the camp during the night, although there was a watch kept at each end of it. The howling of the wolves was almost constant.

On the 27th, the current in the Sacramento had become much more rapid, and the snags more frequent; its banks were on an average about twenty feet above the water, though there was every appearance on them of their having been overflowed. The prairies are perfectly

level, and every where overspread with dead shells of the Planorbis. In some places these shells appeared as though they had been collected in heaps. From the top of these banks, the Prairie Butes were in sight to the northward and westward.

As they proceeded up the river, the country continued of the same character, the level being only interrupted by the line of trees that borders the river. These consist of oaks and sycamores.

They encamped at a late hour, on a spot where the prairie had been burnt over, and were much disturbed during the night, by the bears, wolves, and owls. Near this camp was a deserted village.

On the 29th, they for the first time met Indians, who appeared quite shy, concealing themselves behind trees. As they increased in numbers, however, they became more confident, and invited the party to land. Towards noon the character of the country began to change, and trees of a larger size than before were seen, growing out from the banks. A little after noon, they met with the remains of a fish-weir. Some Indians were seen along the banks, armed with bows, arrows, and lances: none but males appeared; they, however, made no hostile demonstrations.

Game and fur-bearing animals had become more numerous, and among them were the lynx and fox. The latter is the species whose fur brings a high price in China, where as much as twenty dollars is paid for a skin. This fox is said to have one peculiarity, namely, that when chased it will ascend trees. Bears were also in great numbers. It is reported that they will sometimes attack and eat the Indians.

Dr. Marsh thinks there is but one species, the grisly bear; but the black bear of the United States is found in New Mexico, and highly prized for its skin; though Dr. Pickering thinks he saw another species, whose summer coat approaches the yellow bear of Oregon. The skin of the young is here sometimes made into quivers, and they are destitute of the horny claws of the grisly bear. The skin of the latter animal is said sometimes to be as large as that of an ox; its food is the same as that of the Indians, and varies with the seasons. Its strength is said to be prodigiously great, and it has been known when lassoed to drag three horses; and when baited in the bull and bear fights practised in California, will check the charge of a bull by putting out one of its paws.

They will also ascend the oaks for the acorns, and break off branches so large as almost to ruin the tree. It has been generally supposed that they do not climb; but all the hunters bear testimony that they can do it, although slowly and clumsily. They are now less

numerous than formerly; indeed, it is alleged that the lower country, near the San Joachim, was once so infested with these bears, that the Indians were obliged to keep to the high lands when travelling.

It does not at all times kill its enemies when it has them in its power; rarely attacks a man unless he comes upon him by surprise, and is not considered a dangerous animal.

Anecdotes are told of hunters who had fallen into the power of grisly bears, which would cover them up with brush, grass, and leaves, and put them down, without further molestation, so long as they remained quiet; if they attempted to rise again, the bear would again put them down, cover them over as before, and finally leave them unhurt.

Three or four are usually seen feeding together. The cubs are remarkably small in proportion to the full-grown animal.

Lieutenant-Commandant Ringgold, Dr. Pickering, and Mr. Geiger, landed to procure an interview with the chief, who, with some others, was prevailed upon to accompany them to their encampment. The chief presented them with a tuft of white feathers, stuck on a stick about one foot long, which was supposed to be a token of friendship. These Indians were naked, and some of them had feathers in their hair, arranged in different ways. One among them was seen pitted with the small-pox, which was the only instance that had been observed of the sort. Their fillets of feathers somewhat resembled those worn by the chiefs at the Sandwich Islands; and feather cloaks were seen at the village, resembling some we had seen to the north, near the Straits of De Fuca.

Their bows and arrows were precisely like those described as used by the more northern tribes. The arrows were about three feet long, and the bows were of yew, encased with sinew. Their arrows, as well as their spears, which were very short, were pointed with flint.

These Indians were generally fine robust men, of low stature, and badly formed; but the chiefs, five or six in number, were fully equal in size to the whites, though inferior in stature and good-looking as compared with the generality of the Polynesians. They had a strong resemblance to the latter, except that the nose was not so flat and their colour rather darker. Although the men go naked, the women are said to wear the maro. The males seemed to be exceedingly jealous, on account, it is said, of the unprincipled conduct of the whites who have occasionally passed among them. Their hair is not worn as long as it is by the northern Indians, and is much thicker. They had beards and whiskers an inch or two long, very soft and fine.

One of them was observed to have stuck in his head a long pin or

small stick, like that so much in use among the Feejees. Most of them had some slight marks of tattooing on their breast, somewhat similar to that of the Chinooks. Several of them had their ears bored, and wore in the opening round pieces of wood or bone, some of which were carved.

Their rancheria, or village, consisted of no more than five or six huts, built around a larger one, which appeared somewhat like the "tamascals"—sweating-houses. All their houses were formed in the following manner: a round pit is dug, three or four feet deep and from ten to twenty feet in diameter; over this a framework of sticks is raised, woven together, upon which is laid dried grass and reeds; the whole is then covered with earth. They have one small opening, into which it is necessary to creep on all-fours; another is left on the top, which is extended upwards with bundles of grass, to serve as a chimney; in some of the houses there was a kind of hanging-shelf, apparently for the purpose of drying fish. The tamascal differed in no respect from the others, except in its size, and appeared sufficiently large to contain half the inhabitants of the rancheria; but, unlike the rest, it had several instead of one opening; all of these had coverings, which are intended for the purpose of retaining the heat as long as possible. The Indians are particularly fond of these baths, and make constant use of them. The roofs of their houses are strong enough to bear the weight of several persons, and the Indians are usually seen sitting on the top of them. Previous to our gentlemen reaching the rancheria, their women had all decamped, excepting one old one, who, on perceiving the party close to her, dropped her load, and in excessive fear darted off like a wild animal. Around the huts were scattered vast quantities of the mussels' shells and acorns, which would therefore seem to be the principal articles of food. Near the huts, large branches of trees had been stuck up for shade. Some water-tight baskets and bulrush mats were their only fabrics. They do not appear to pay any attention to cultivation, and the only appearance of it was in a species of Cucurbita (mock orange), planted near their village; but what use they made of this was not learned.

This rancheria is said to contain between two and three hundred warriors, who are a fair specimen of the tribes of the country, and are the most troublesome to the trappers, with whom they generally have a fight once a year. On one occasion, the Hudson Bay Company left their cattle in their charge, and when the delivery was demanded they refused to give them up; war was accordingly made on them, and after they had lost forty of their warriors, they consented to return the

cattle and make peace. These Indians do not use the tomahawk, nor practise scalping. They go unclothed, even in winter, although the climate is occasionally quite cold in this northern part of the valley.

On the morning when the party were breaking up camp to embark, an Indian boldly seized the bowie-knife-pistol of Dr. Pickering, and made at once for the woods. He had chosen his time well, for no arms were at hand. Several of the men pursued him, but by his alertness he eluded all pursuit; and having gained the bushes, escaped with his prize.

This act, committed in open daylight, and at the risk of life, shows how strong is their propensity to steal. All the other Indians present soon understood the difficulty, and at once took their departure. The chief was not present; those who were concerned in the theft had not been before seen, and it was conjectured belonged to one of the rancherias higher up the river. A short distance above the place where this occurred, they met the chief, to whom the theft was made known, and who promised to restore the stolen article.

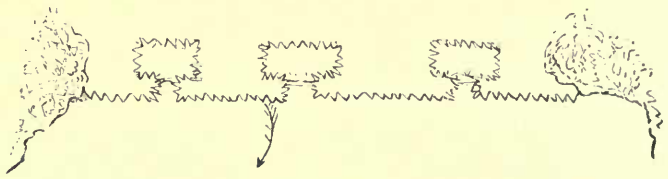
At noon they passed the Prairie Butes, which are a collection of isolated hills, rising from the level plain, as if out of the sea. As they were visited by the party that passed through from Oregon, I shall give a particular account of them in the narrative of that journey. They formed one of the connecting links between the operations of the two parties, and served to verify their respective observations. Indians were seen on the west bank of the river, with a number of women in company, who seemed well disposed to enter into communication, as they motioned the party to land.

In the afternoon they encamped on the west bank, at a considerable distance above the Butes. The river was here only two hundred feet wide, and its banks but fifteen feet high. The trees on the shores had now become quite thick, and grew with great luxuriance; so much so, that were the sight confined to the river banks, it might be supposed that the country was one continued forest, instead of an open prairie.

The Indians who visited them at this camp, were less timid, and a much finer-looking set of men than those before seen. They allowed the officers and men to examine their bows and arrows, and appeared to have confidence in our good feeling towards them. The old chief welcomed the party, granted them permission to encamp on the bank, and then departing with all his tribe, nothing more was seen of him until late the next morning.

On the 31st, they again proceeded, and passed several Indian villages. Before noon, they arrived at a substantially-built fish-weir, of which the Indians began to take a part down, but Lieutenant-Commandant

Ringgold deeming that this was the termination of his exploration, motioned to them to desist. This fish-weir was constructed with a great deal of art: stakes, pointing down the stream, had been driven into its bed, having three openings, which led into square pens above; over each of the entrances into the pens was a platform, on which the natives stand to take the fish; on these also there were heaps of ashes, indicating that the natives make use of fire to attract the fish. The annexed wood-cut is a representation of the weir.



FISH-WEIR.

The river was examined for two or three miles above, and found to be filled with rapids, and innumerable difficulties caused by snags and sand-bars. Here Lieutenant-Commandant Ringgold ascertained his position to be in latitude 39° 13′ 39″ N., longitude 122° 12′ 17″ W., which, joined to the work of the land party, gives the exploration of the whole extent of the Sacramento river, from its source to the sea, a distance of two hundred miles. The first fork, or the junction of Pitt's with that of Destruction river or creek, is in latitude 40° 47′ N., longitude 122° 34′ W.

The Indians of this tribe, the Kinkla, were disposed to be much more friendly than those met with during the two preceding days. The party had some intercourse with them, and many of the women were seen, some of whom wore the peculiar Polynesian dress, called the maro, which in this case was made of strings from the Californian flax, which is common in this part of the country. Where this cannot be procured, they use the tula. This garment hangs in considerable thickness both before and behind, but is open at the sides.

Of these Indians it is reported that no one has more than one wife. Their village was similar to that already described. The women were not very prepossessing in their appearance, although the younger ones had pleasing faces and fine forms; but the men were large and stout, and would be termed finely formed. The women were employed in drying grass-seed and acorns in the sun, of which the latter seemed to be the principal part of their food. These Indians had small fishing-nets, somewhat resembling in size and shape a lady's reticule. These they made use of when diving for mussels, and in a

short time procured half a bushel of them. They had also larger nets, which very much resemble our own; but on close examination, the manner of forming strands of the cordage was found to be different.

Their language is soft compared to that of the northern Indians, and as much so as that of the Polynesians. In but a few cases was the guttural sound of *tch* observed; and the repetition of syllables is frequent, as "wai-wai," and "hau-hau-hau." Lieutenant-Commandant Ringgold obtained a small vocabulary of the language from a chief, and Captain Suter furnished much information respecting it. According to him, although there are many tribes, yet they speak no more than two distinct languages, one of which prevails on the east and the other on the west side of the Sacramento. This information, however, was contradicted by other authorities; but as this subject belongs to the report on philology, I must refer the reader to Mr. Hale's book on that subject for further information.

According to the best authorities, these Indians, so far from being cannibals, will not eat any kind of animals that eat man. They carry burdens in the same manner as the northern tribes, with a strap round the forehead. They live upon various plants, in their several seasons, besides grapes, and even use the Artemisia. A species of tobacco is found on the sandy beaches, which the Indians prepare and smoke.

Their bows and arrows were carefully made, and the latter were kept in quivers made of fox-skins, young bears, &c. In each of these they had about forty arrows, pointed with flint and neatly made.

The vegetation throughout the whole course of the Sacramento showed evident traces of salt, and in some places the prairies seemed to be incrusted with it.

At the place where the survey ended, the river was two hundred feet wide, its banks being twenty feet above the river; but it was evident that its perpendicular rise exceeded this, as there was every appearance of its overflowing them; and, according to the testimony of the Indians, the whole country was annually inundated.

On the afternoon of the 31st of August, the party turned to go down the stream, and with the aid of the current made rapid progress. Towards sunset they entered the small stream called Bute, on whose banks they encamped. Here they were much disturbed, both with bears and musquitoes.

On the 1st of September, they made an early start, and about noon reached the village where the theft of Dr. Pickering's pistol had been committed.

It was with some difficulty that the Indians were persuaded to approach; but a fine-looking savage, more bold than the rest, at last ventured to do so, and gave the information that the Indian who had committed the theft, resided at the village up stream.

The weapon therefore not being forthcoming, Lieutenant-Commandant Ringgold determined to seize this man as a hostage for the return of the article. He was accordingly secured, his arms pinioned behind him, and led down to the boat, when two men were ordered to tie his legs; while they were in the act of doing this, he extricated himself, and jumped overboard. The guns were at once levelled, and half a dozen triggers ready to be pulled; but Lieutenant-Commandant Ringgold very properly stopped them from firing, and endeavours were made to recapture him, but without effect. These efforts having failed, they took to their boats, and pulled down the stream. The Indians who were on the banks, to the number of two hundred and fifty, made no demonstrations of hostility.

Platforms similar to those erected by the Indians for spearing salmon, were passed along the river banks.

Having stopped at the same camp at the Poplar Grove, as on the 28th, they took a few hours' amusement in hunting. Each person who went out returned with an elk or a buck as a prize, with large antlers. According to the hunters, the elk obtains an additional prong every year; and one of those killed had sixteen. The antlers are shed every year, and only acquire hardness at the rutting season, when the velvet is rubbed off. The usual length of their life is from eight to ten years.

On the 3d, they continued the survey, until they were below Feather river, when the provisions were so nearly exhausted that Lieutenant-Commandant Ringgold found that it would be impossible for him to examine that stream. The residents and trappers informed me that they had followed it to its source. From them I learned that it takes its rise in the Californian Range, from which it pursues a southwest course, until it falls into the Sacramento river. It is about forty miles in length. It is believed that the Spaniards, when they first explored this country, designated the Feather river as the Sacramento, and gave to the true Sacramento the name of the Jesu Maria. In no other way, at least, can the error which has occurred, in relation to the Jesu Maria, be explained; and on this supposition, the accounts of it become intelligible.

In the neighbourhood of the Sacramento, there are sometimes to be found small lakes or bayous, which seem to be filled at high water, but become stagnant during the dry season. These the elk and deer fre-

quent in large numbers. Their cry or whistle is at times very shrill, and may be heard for a great distance.

At the junction of the Feather river with the Sacramento, the latter increases in width to nearly double. It was found just below the junction to be from twelve to fifteen hundred feet broad, forming a sort of bay, but it soon again contracts. They encamped about ten miles below the confluence of these streams.

Whilst the men were employed in pitching the tents, Dr. Pickering strolled up the bank, to see what he could find in the botanical way, without arms. On his approaching the bushes, a huge grisly bear made for him, and so close was he that it was necessary for him to make all the exertion he could to effect his escape from so dangerous an adversary. He gave the alarm, and every one was running for his arms, but before these could be prepared, this inhabitant of the forest made a precipitate retreat, and was soon beyond the reach of the rifle.

On the 4th, they had returned to Captain Suter, where they found that a small Russian schooner had arrived from Bodega, bringing the governor of that establishment, who was about delivering it up to Captain Suter. The vessel was understood to have been built at Sitka, and was of only thirty tons burden, very much resembling an English vessel of the same class.

For a boat they use a skin "badaka," that is admirably adapted for the seas and weather they have to contend with. When the persons are seated, and the opening closed, with a skin dress they more resemble an aquatic animal than any thing else.

The morning after their arrival, Captain Suter paid his men their weekly wages, in cloths, calicoes, vests, shirts, and pantaloons. The whole was arranged through their chief, who spoke a little Spanish. The labourers are obtained from the different rancherias, and some from the vicinity of the mountains. It was observed that the larger portion of the labourers were young men and boys; no women were employed, and as yet their services are not needed; but it is the Captain's intention, as he informed our gentlemen, to have employment for them in a year or two.

Several Americans from the United States are beginning to settle in this part of the country, and it will not be long before it becomes in some respects, an American Colony.

Although it was late in the season, a few salmon were caught at the fishery; they were not to be distinguished from the Columbia species of the first run.

The Indians have several rancherias around New Helvetia. Their lodges are all somewhat like low haycocks, being composed of a framework of sticks, thatched with the bulrush. In these there was no excavation, neither were they covered with earth; these dwellings were at the time deserted by the Indians, who were found encamped about half a mile nearer the river, with but a few boughs and mats to shelter them. The latter are manufactured after the manner that has been described as used by the Indians of Oregon.

At the rancheria, the men are generally found engaged in various games of chance, similar to those before described; it is not believed, however, that they carry their gambling propensities to such an extent as to stake their liberty. On the women, all the drudgery seems to be thrown. They were seen engaged in weaving water-tight baskets: these are very neatly made, of sufficient capacity to hold a bushel, and in these it is said they contrive to boil water and cook their food.

In the preparation of the acorn-bread all assist. The acorns are gathered in very large quantities, piled in heaps, and spread in the sun to dry. Both men and women are to be seen employed shelling, pounding, and baking them into bread: the pounding is performed upon a plank that has been hollowed out, with a stone pestle. To reduce the large quantity to a fine powder, requires great labour. This employment presents a busy scene, though the want of cleanliness, I may almost say pig-like filthiness with which it is performed, excites disgust.

INDIANS POUNDING ACORNS.

Around New Helvetia, although but a few days had elapsed since

their former visit, the country, if possible, appeared more arid; it by no means justified the high encomiums that we had heard bestowed upon this far-famed valley. Our expectations probably had been so much raised as scarcely to allow us to give it that credit it really deserves.

The valley of the Sacramento may include a space of one hundred and eighty miles long, by from twenty to fifty miles wide. A large part of this is undoubtedly barren and unproductive, and must for ever remain so. The part that is deemed good soil, is inundated annually, not for any great length of time, yet sufficiently long to make it unfit for advantageous settlement. The high prairie is spoken of as being in general barren, and as affording but little good pasture.

The crops are usually ripe in June, which enables the wheat and Indian corn to be gathered before the summer drought begins. There is usually a rainy season of three months, but during the year of our visit no rain had fallen; and from every crop having failed, the inhabitants had been living upon their cattle. The cattle suffered almost as much as the crops, and large numbers of them died from starvation. On this account, the inhabitants had forborne to kill their cattle for hides, believing it to be a great loss to do so, as the weight was so much depreciated as to pay little more than the labour of slaughter and preparing for market.

The variety of game in this country almost exceeds belief. The elk may be said to predominate, but there are also many bears, black-tailed deer, wolves, foxes, minxs, hares, musk-rats, badgers, antelopes, and Ovis montana. The wolf is reported by Dr. Marsh to be the same as the prairie-wolf of the Upper Mississippi, but not the one described by Say. Mr. Peale in his report will probably assimilate it to the small one of Oregon, with large ears. The fox is the same as the gray one of the wooded parts of the United States. According to Mr. Peale, the black-tailed deer is the only species found in this country. The Ovis montana has been frequently seen by Dr. Marsh; its coating is altogether hair, without any admixture of wool. No specimens were obtained for the Expedition.

The badger was seen by Dr. Pickering, who attempted to capture one; he found no difficulty in following it, as its movements were not very rapid. After passing over some hills, it made a stand; and as he approached, bristled up, but made no other threatening demonstration, and retreated backwards to its burrow. On his feigning a retreat, it came again forth and exposed itself to be fired at. Dr. Pickering wounded it; but not so much as to prevent its reaching its burrow, and so it escaped. He was satisfied by its movements, that its curiosity was

the cause that led it to risk destruction. This seems to be the great and all-powerful instinctive passion of these wild animals, and frequently retains them within reach of the deadly rifle. Considering the quantity of game, the success attendant on our tyro hunters was not equal to their anticipations, and convinced them that it is much easier to bring down an elk in anticipation than in reality. The accidents were few, and only one annoyance was experienced, in the chase of a skunk, which obliged the officer to part with his clothes. The wild-fowl scarcely claimed attention, the elk and large animals being so abundant. The flesh of the elk was much preferred by the party to that of the deer.

On the 6th, the survey being finished down to this point, they descended the river, on their return to the ship. On the 8th, they had arrived at the mouth of the river, and the Straits of Kaquines. On the 9th, at midnight, they reached the Vincennes, after an absence of twenty days. Subsequent to this date, on the 20th, Lieutenant-Commandant Ringgold proceeded again, with six boats, to examine the bay of San Pablo, and the streams that flow into it, and also up the San Joachim, until it branched off to the southward and eastward. This party returned to the ship on the 29th.

Whilst the Vincennes was at Sausalito, the officers made visits to the different places around, and received many persons on board, priests as well as laymen; and as their estancias or mission-houses were far removed, they became guests for a longer time than was agreeable to most of the officers. A Californian needs no pressing to stay, as long as he is pleased with the place; and that he should be so, it is not necessary to furnish him with luxuries: he is content with coarse fare, provided he can get enough of strong drink to minister to his thirst. I have already spoken of the great consumption of spirits that is said to take place in this country; and from the experience we had of it, the accounts certainly are not exaggerated. The palm for intemperance was, I think, generally given to the padres, some of whom, notwithstanding their clerical robes, did ample justice to every drinkable offered them; and so well were they pleased, that some of them made a visit of three days' duration, and were even then disinclined to leave. It is not to be denied that they left the same impression of their characters on board that it has been heretofore said they bear on shore. The officers all seemed disposed to draw a veil over the conduct to which they were witnesses, and I will not be the one to raise it, as it can be of little benefit, and might perhaps be applicable to only a few of the order.

Our intercourse with Señor Martinez and his family was much

more agreeable. Of them, Captain Beechey has given a delightful account. Martinez has now retired to an estancia, where he is living in what is, in this country, affluence. His wife and himself have grown older, but still retain the character drawn of them by Captain Beechey. Near Pinole, Señor Martinez has a large house, but meagerly furnished, where he is surrounded by his large family of children and grandchildren. His wife is the same managing body, and keeps a strict eye upon her younger daughters, who are all good-looking.

The Californians are always inclined for amusement, and dancing is their favourite pastime, so that where a family is large, they seldom fail to pass off the evening pleasantly for their guests. Quadrilles and Spanish dances are the fashion; and the desire to please is as strongly exhibited in this family as it was during the visit of Captain Beechey. After dancing until a late hour, supper was provided, when the guests were either accommodated for the night, or set out to return to their homes, which, if they be unable to reach, they pass the night in the open air, using their ponchos and saddle-cloths for covering. During the nights there is but little wind, and the atmosphere is generally so dry and clear, that a person may, with impunity, sleep in the open air.

Three of the daughters and two of the sons of Señor Martinez are married; one of the former to Don Vitro Castro, and another to the captain of the port, an Englishman by the name of Richardson, who lives at Sausalito, and who supplies vessels with provisions. He was very attentive and obliging in furnishing the ship with supplies, and affording us the means of baking bread for the daily supply of the ship.

Captain Richardson has an estancia, bordering on Sausalito Bay, prettily situated under the hill, with sufficient fertile land for his gardens, or rather fields, where his vegetables are raised. His house is small, consisting of only two rooms, and within a few rods of it all the cattle are slaughtered, which affords a sight and smell that are not the most agreeable. A collection of leg-bones, hoofs, horns, and hides, lay about in confusion, for which numerous dogs were fighting. It was with great difficulty that these animals could be made to cease their strife; and what with this and the barking kept up by others, both without and within doors, there was such a clamour raised as required all the household, consisting of husband, wife, daughter, and slave, to quiet. Captain Richardson's establishment is a fair representation of the manner of living in California, and articles which are condemned elsewhere are acceptable here. However small the apartment may be, it is but sparingly furnished, and with no view of comfort, in our sense of the word; cleanliness, the great promoter of

it, is wanting, and the indolence of the people seems an insuperable bar to it. Señora Richardson shows the marks of former beauty, which her daughter has inherited, and is said to be the handsomest woman in all California. I had the honour of seeing them when I returned Captain Richardson's call, and they were, in the Spanish style of beauty, quite deserving of the reputation they had acquired.

Captain Richardson did what he could to afford amusement for the officers, and during the visit of Señor Martinez to the ship, an invitation to a dance was accepted by some of them. Although the house was small, yet they made out to pass the evening with great hilarity, Señor Martinez dancing with two of his grand-daughters—one on each arm. The group of musicians it was thought might have sat for the portraits of Roman soldiers. The evening's entertainment passed off well, the dancing having continued the greater part of the night. The Californians must be ranked next to the Chilenos for their love of this amusement. The refreshment consisted principally of strong drinks. Señor Martinez is looked upon as one of the aristocrats of the country. Much deference is paid to his opinion, and an alliance with his family is much sought after. The old lady exercises a matronly care over her daughters, and has them ever under her watchful eye. Captain Richardson's daughter, though only seventeen, is so famed for her beauty and attractions, that she has several avowed suitors. Courtships are here conducted somewhat in an old-fashioned manner. The suitor is obliged to avow himself and receive permission to visit. All who visit the estancia near Pinole will meet with that warm reception and kind treatment that Señor Martinez, his lady, and family, are so remarkable for.

On the opposite side of the bay of San Pablo, or to the west, are some of the finest tracts of country in California. One of these is called the Valley of Nappa, another that of Zonoma, and a third, San Rafael. In Zonoma is situated the town of the same name, the residence of General Vallejo, and the mission of San Rafael. The fertile country extends across to Ross and Bodega, the two Russian settlements before spoken of. Zonoma is the seat of government, and is situated in an extensive plain, with some high hills for its southern boundary. The plain is covered with fine oaks, and there is a never-failing stream of water passing through it. There is besides an inlet from the bay, which allows a boat navigation to it of about twelve miles.

Upon paper, Zonoma is a large city, and laid out according to the most approved plan. In reality, however, it consists of only the following buildings: General Vallejo's house, built of adobes, of two stories,

which fronts on the public square, and is said to be one of the best houses in California. On the right of this is the residence of the general's brother, Salvadore, and to the left, the barracks for the accommodation of the guard for the general, consisting of about twenty fusileers. Not far removed is the old dilapidated mission-house of San Francisco Solano, scarcely tenantable, though a small part of it is inhabited still by the Padre Kihas, who continues, notwithstanding the poverty of his mission, to entertain the stranger, and show him all the hospitality he can.

Besides the buildings just enumerated, there were in the course of construction, in 1841, a neat little chapel, and a small building for a billiard-room. There are also three or four more houses and huts which are tenanted; and at some future day it may boast of some farther additions.

General Vallejo was one of those who figured in the revolution of 1836, and was then appointed Commandant-General of Alta-California. He is now the owner of large estates; and having chosen this part of the country for his residence, he is free from the opposition and broils that are continually growing out of the petty concerns of the custom-house and its duties. He is not over-scrupulous in demanding duties of the vessels entering the port of San Francisco; and until he has been seen and consulted, a vessel trading here is liable to an indefinite amount of duties. A portion of the payment adds to his wealth, and how much goes to the government is not known; enough, I was told, in some cases, to save appearances, and no more. The foreigners who trade here are very attentive to him; and it might be supposed, before making inquiry into the cause, that he is a great favourite with them. The highest official protection is necessary for all those who wish to prosper in their trade to this port, and to prevent exactions from subordinates.

I have already spoken of the unceremonious manner in which Captain Suter officiated as administrador of the district to the east of the Sacramento. The anecdotes related to me of Vallejo, in like manner, show a striking disregard for the lives, as well as for the property and liberty of the Indians and gente de razon. He is supreme, and acts with the same impunity as all his predecessors, with one or two exceptions, have done before him. As an instance of the lawless acts of the governors, it is said that one of them entertained the idea of training the Indians as soldiers, and a company of them had been brought together, drilled, and made such proficiency in the use of their arms, that his excellency became alarmed, and forthwith ordered them all to be shot! I have little doubt that this story may be essentially

true, for the value of an Indian's life in the eye of the rulers scarcely exceeds that of one of the wild cattle. The commandant-general is frequently said to hunt them, and by his prowess in these expeditions he has gained some reputation. Salvadore Vallejo is engaged in agricultural pursuits, and particularly in raising cattle, which, under the governor, he has the especial privilege of supplying to vessels, which he does at prices that insure a handsome profit. In times of scarcity, vessels are sure to be supplied by applying to the governor, who will order supplies to be furnished, and even obtain them by compulsion. On my arrival, finding that we wanted supplies, and not knowing how long (in the event of an accident to our land party) I might be detained, I was advised to apply to the commandant-general, through whom I would be sure of obtaining them. I therefore despatched a note by an officer, whom the general treated with great politeness, and returned for answer, that he could supply me with the following articles: Lima beans, wheat, potatoes, and other vegetables, which we had been unable to obtain. Fortunately for us, as well as for the lower orders and Indians, the party arrived, and we were not under the necessity of making use of his powerful intervention. The general, I was told, considers every bushel of grain as much at his command as he does the persons of the people, and the property of the state. Zonoma is to be the capital of this country, provided the general has power and lives long enough to build it up. An idea has got abroad that he is looking to the gubernatorial chair, and to be placed there by the same force that has raised Alvarado and himself to the posts they now occupy.

Zonoma is on the road that leads to Ross and Bodega; and by this route Captain Suter has transported all the stock he purchased of the Russians.

The reality of the hostility said to exist between these two rival administradors, seems doubtful, at least to the extent reported by the residents.

The state of society here is exceedingly loose: envy, hatred, and malice, predominate in almost every breast, and the people are wretched under their present rulers; female virtue, I regret to say, is also at a low ebb; and the coarse and lascivious dances which meet the plaudits of the lookers-on, show the degraded tone of manners that exists.

The mission of San Rafael is in the fertile valley of that name, about twelve miles from Sausalito, and consists of a large building, with a small chapel at its end; it is in a tolerable state of preservation, and is under the superintendence of an Irishman, named

Murphy. He has been put there, from its being considered a place of emolument, through his interest with the governor, and in order to pick up the crumbs that are still left. I understood, however, that Murphy had been disappointed in his expectations, and that it was his intention to establish himself elsewhere. Padre Kihas resides at this mission for six months of the year, and performs the duties of priest to those around it.

On the 24th of October, a fête was given at this place, in honour of the patron saint; and it was rumoured that there was to be a grand bull-fight. This spectacle came off accordingly, but was so miserably conducted as to prevent all kind of sport. The bulls had greatly the advantage, and the men and horses were tumbled about in a ridiculous manner, until they both became quite shy. They had cut off the tips of the bulls' horns, which was a fortunate circumstance for both horses and riders, who received no material injury. There was no bull and bear fight; in consequence, it was understood, of their not being able to procure one of the latter animals. In the fights between the bull and bear, it is said that however strong and savage the bull may be, the bear is always the conqueror: the only part of the bull he endeavours to attack is the tongue, by seizing which he invariably proves the victor.

When the fights were over, dancing was resorted to, and continued during the evening and all night. It was accompanied with hard drinking and uproarious conduct. Mr. Murphy's entertainment was considered fully equal to any that had been given for some time, and particularly the latter part of it, which may be better imagined than described.

Our duties at this port being completed, I felt desirous of knowing something of the missions at the south end of the bay of San Francisco, and, with Captain Hudson, determined to make a visit to them.

We left the Vincennes on the morning of the 29th, at an early hour, intending to reach the mission of Santa Clara by water. We stopped a short time at Yerba Buena to see Captain Hinckley and Mr. Spears, who kindly furnished us with a guide to point out the passages through the shoals, and the entrance to the creek that leads up to the Embarcadero, the landing whence the people of the mission usually ship their hides. We had a fine wind, and went briskly on until we reached the upper part of the bay, where we found our guide useless as a pilot. The consequence of his incapacity was, that we got on shore, and were detained so long that night overtook us before we entered the river Caravallio, that runs in a tortuous direction to the Embarcadero. Its course more resembled the turns of a corkscrew

than any other thing to which I can liken it. I think we counted twenty-nine bends before we reached the point at which we were to disembark, which was nearly at the head of the creek. We were compelled to haul the boat along by the grass and rushes on each side, and it was near midnight before we achieved our object. As we passed through this narrow inlet, the birds that were lodged for the night, alarmed by the noise we made, flew in thousands from the marshes. Their fluttering was so great as to resemble the rushing of a vast wave; for as they rose, thousands seemed to follow thousands, until the sound died away in the distance, and again seemed to approach in an opposite direction. In the pitchy darkness, not a bird was to be seen, although they must have passed only a few feet above our heads.

At the Embarcadero we found no house or accommodations of any kind; but the guide soon led us to what he termed the road, which was found marked by the huge ruts made by the ox-carts. The walk was of service to us, as we had become chilled with the cold and damp air.

After proceeding a mile over a level plain, we reached the estancia. The first notice we had of it was a broken coural, and the ground covered with vast quantities of bones, hoofs, and horns. Over these we stumbled continually, until, on turning the corner of the coural, we were set upon by a pack of dogs, some fifty in number, which barked in every tone, from the snappish note of the pug to the sonorous voice of the bull-dog. All came forward, intent upon arresting our progress towards the large adobe building, which was now in dim outline before us. The bones served us as missiles to keep them at bay, and thus to protect our approach to the premises; and when we reached the porch, we gave the discourteous curs a full discharge. We knocked lustily for some time, but no answer was returned, nor could we see any light; but on a frequent repetition, each time redoubling our efforts, we at last heard light footsteps, and the door was suddenly opened by a little Indian girl, who ushered us into a large room, which, from the tables, chairs, and closets with china, we found to be the *salle à manger*. Here we had a full view of the interior; and the light which was burning in the adjacent rooms, showed us the occupants fast asleep. We had scarcely time to look around us, when a huge Californian, more than six feet in height, and proportionately large, stalked towards us in his shirt. His whole figure and countenance indicated a savage, and carried me back at once in idea to the Feejee cannibals. In a gruff tone he demanded our wants, and when he had satisfactorily ascertained who we were, and received a

cigar as a token of friendship, he called up the whole family, consisting of a mother, two daughters, and several other children. These, after dressing themselves, came forth, and greeted us with genuine hospitality, with such pleasant faces and cheerful talk, that it was really delightful to find ourselves in such quarters; and our surprise was the greater, in consequence of the exterior having proved so uninviting. They immediately set about providing us with supper, consisting of tea, tortillas, valdivias, ollas, with eggs and a steak; and while this was in preparation by some, others were arranging the beds and changing the furniture of the sleeping-room. All this was done whilst the mother was talking and waiting upon us; and after supper was over, she pointed to our room, and then excused herself, by saying she must provide something for the sailors who had accompanied us; whilst we retired to rest, much fatigued with our jaunt.

The room was furnished differently from what we had been accustomed to, yet it was quite comfortable. The only piece of furniture that was not new to us was a high-post bedstead, evidently from our own country, though bedecked with old Spanish tapestry, in the way of tester, curtains, and valance. Instead of drawers, there were huge trunks, that put to shame those of modern construction. These contained the household linen and the finery of the females of the family, and were raised from the floor, that a broom might be passed underneath them. Here and there on the walls hung a new-made dress, of ample dimensions, and several Spanish sombreros, those that were of more recent date hanging highest; at least I judged them to be the best ones, from the careful manner in which they were covered up. There was no wash-stand; but a French ewer and basin, of the lozenge shape, of white and gold porcelain, were placed on a chair. A single looking-glass was hung high over it, its head inclining outwards. The dimensions of the frame were small, and the glass still smaller, owing to a figure of a patron saint occupying the larger part of the upper surface. Of chairs we had five, two with leathern seats and high backs; the others were of home manufacture. A large grated window, well barred with iron, with the thick and massive walls of an adobe house, gave it the look of security for confinement within, or against attack from without. Half a dozen coloured prints of the saints, ten inches square, in black frames, graced the walls.

Our beds, and every thing connected with them, were comfortable; and the manner in which we had been provided for made the entertainment doubly welcome. We found in the morning that we had occupied the sleeping-room of our hostess and her daughters, and that they had given it up expressly to accommodate us.

Before going to bed, we had made arrangements to send for horses to take us to the mission of Santa Clara, some three miles distant. None were to be obtained here, as the head of the family was now away, and had taken with him all those that were kept about the premises; the rest, we were told, were "muy lejos" (afar off).

The name of the family is Peralto, which is connected with the early settlement of California, and one of the most respectable in the country.

We arose about eight o'clock, and consequently missed our chocolate, which is given at an early hour, and could get no breakfast until eleven o'clock. Our horses had not arrived, and whilst we were waiting for them, Señor Don Miguel Felesfore de Pedrorena arrived from Yerba Buena, who at once made our acquaintance. He very kindly offered us his services to arrange matters, and to assist us on our way to Santa Clara, where he was then going. To this gentleman I feel myself much indebted. We found him a lively, intelligent companion, and well acquainted with the country and people. He is supercargo of several vessels on the coast, and extensively engaged in the peculiar manner of trading, of which I will have occasion to speak presently.

While horses were sought for us, we spent the time in looking around the premises. The house was a long one-story adobe building, with a thickly thatched roof, forming, by its projection, a piazza in front, supported by columns. There were many enclosures about the house, that gave it the appearance of a farm-yard and slaughter-house combined. Bones, hoofs, horns, and pieces of hide, were lying in every direction, and the ground was indented with the feet of cattle. Ducks, dogs, and fowls, were picking at the bones and offal. There were one or two ox-carts, of clumsy proportions, a bee-hive, and a ley-vat, formed of hide and suspended to four stakes, in the shape of a large bag, hung near by. At a short distance from the house was the vegetable-garden, where every thing grew in profusion, although without care. The only trouble in gardening was to put the seed into the ground, and await the result. This estancia is situated between two copses of wood, that grow on the banks of the brook that winds past it, and nearly join in the rear. In front is a plain, extending fifteen or twenty miles to the foot of the Sierra, which forms a pleasing and bold contrast to the flat surface, on which nothing is seen but here and there a small group of cattle, and immense flocks of wild geese; or some shrub, which, owing to the refraction, appears almost detached from the surface, and with dimensions so much enlarged as to appear like a great tree. The plain at this time was of a dark hue, somewhat

resembling a light bronze colour, in consequence of the vegetation having been scorched up for many months.

About nine o'clock, five horses arrived instead of the eight we were in need of. These were literally the lame, halt, and blind, having sore backs, and being withal half starved. One had an eye protruding from its socket, another was without a tail. In any other country and place we should have refused to mount such horses; they were indeed sorry beasts, and compared with that of Don Miguel's, that had been in waiting for him, truly deplorable. Of the caparisons I shall only say, that sheep-skin and raw-hide predominated, although I regretted before the league was passed over that I had not had more of the former under me. I felt ashamed, even in California, to be thus mounted. We took leave of our kind hostess with many thanks for the attention she had showed us, and engaged her to provide an ample supply for the boats' crews during our absence.

The league between the Embarcadero and Santa Clara occupied us somewhat over an hour, for it was unbearable to attempt to ride faster than a walk. After ten o'clock, we came in sight of the mission of Santa Clara, and as we approached it the little ponds and damp places on the prairie were literally covered with wild geese, which would but barely open a way for us to pass through. They were far more tame than any barn-door geese I ever saw, and I could not easily divest myself of the idea that they were not domesticated.

The mission of Santa Clara has, at a distance, a respectable appearance; but on our drawing near the long line of huts, formerly occupied by the Indians, which are now destroyed, excepting a few, the ruin and neglect that have taken place are evident enough. The church and mission-house adjoining have also a dilapidated look; their tile roofs and whitewashed walls require extensive repairs, as well as all the wood-work of the doors, posts, &c. The church flanks the mission-house on the north, and is about one hundred and fifty feet long by forty wide, and about fifty feet high; it is surmounted by a small steeple. The mission-house is of only one story, with a corridor extending its whole length, of one hundred and fifty feet. This dwelling is now occupied both by the administrador and the padre, and a wall divides the premises into two parts, separating the temporal from the spiritual concerns of the establishment. The padre has his own servants, cooks, &c.

As we rode up with Don Miguel, we had no need of further introduction, and shared the kind welcome he received, as an old acquaintance, who had evidently much to do with the affairs of the mission, in the way of business. The administrador and his deputy

came forth to greet us, with an ample retinue of attendants, of many varieties of colour, from the darkest Indian to the pure white. The administrador is a kind, excellent old man, who has risen from being a corporal in the army, to his present post. I could not learn his original name. His wife belongs to one of the best families in the country; and on her marriage with the administrador, she insisted upon his taking her name, which is Aliza, one of the most distinguished in California in bygone days. This, I understood, was not unusual, as the old family pride still predominates among these people. To the old lady we were soon introduced; her countenance and appearance bespoke her excellent character, which is well known throughout California. Nothing could be cleaner or more tidy than her house. Señor Aliza was too unwell to attend upon us, but his deputy acted as a substitute for that purpose. Shortly after our arrival, breakfast was announced, of which, after the ride we had had on our hard horses, we gladly partook.

This meal was considered by us as rather a light one, and consisted principally of fruit, and small ollas, peppers, &c. What it lacked in quantity was made up in quality. This was according to the usage of the country, and although Don Miguel wished to speak to Señora Aliza, with reference to a larger supply, we refused to give her any more trouble than could be avoided. She had prepared the whole with her own hands, and prided herself on her admirable management and cookery. Few certainly could equal her in the preparation of stews and delicate high-flavoured dishes; but of each there was but a mouthful, and the deputy took good care to have more than his fair proportion. After breakfast, I strolled around the premises, and saw our good hostess busily engaged in directing her domestic concerns. The rear of the mission forms a quadrangle of low sheds, in which the domestic manufacture of candles, preserves, baking, and a variety of other duties, are performed. In these were some ten or fifteen Indians busily employed, and although clean, they did not excel so much in this respect as the interior of the main building, which appeared to be entirely under her own keeping.

Don Miguel proposed to us to make a visit to Padre Mercador, and that he might not be taken by surprise, a messenger was sent to ask at what hour he would be ready to receive us. This ceremony is deemed necessary, for the duties of the padre are considered here to be of such a nature as to preclude intrusion. Our messenger speedily returned with an intimation that he would be glad to have us pay him our visit at once. We were soon ushered into the small study

of Padre Mercador, who received us with much courtesy. He is of the Franciscan order, good-looking, portly, and possesses a cheerful and intelligent countenance. Having Don Miguel to interpret in Spanish, and the padre speaking a little French, we made out to converse very well. His study is small, but contains many works of the old fathers, with several French authors, and comprises some six or seven hundred volumes. He showed us the different returns from the missions prior to 1828, but no attention had been paid since that date to the preservation of statistics. In Appendix VII., I have inserted one, in which the state of all the missions throughout Upper California is given, and which embraces not only their population but also the quantity of produce raised. This table will give an idea also of the management of the directors of the missions before the revolution. Since 1828, as already stated, the missions have been on the decline, and no returns have been given in, as was formerly required.

The padre spoke with resignation in relation to the manner in which the missions had been despoiled, and did not express any surprise that such things should have happened under their present rulers.

Padre Mercador served us with wine and fruit; of the latter, the pears were delicious. Don Miguel having notified me that it was expected our party should ask to see the church, I made the request; and the padre having supplied himself with a large bunch of keys, ushered us through several narrow passages, to the door of the vestry-room in the rear, into which we entered. Several pairs of massive candlesticks of silver were standing about on tables, and around the room were large trunks, which he opened, and showed us the rich altar-pieces, costly robes, and fine laces, which they contained. Many of the former were most magnificently embroidered in gold and silver, and composed of substantial silks and satins of divers colours. The splendour of the wardrobe was out of character with the smallness of the church; and on my remarking it, he said these things were for processions, to have effect upon "los gentiles." One or two small pictures that hung in this room were worthy of notice. Don Miguel asserted that he thought if I desired them, there would be no great difficulty in procuring any article that could be spared. I had no disposition to authorize him to make the attempt; but this suggestion tends to show in how little regard the obliging padre was held by the community. We next passed into the church, the whole length of which was thrown into one, without any columns. At one end is the altar, and at the other the choir, which the padre informed me con-

sisted of some eighty Indians, who are daily in practice. He said that the Indians were fond of music, had good ears, and little difficulty was found in teaching it to them. In making the selections of performers, they generally took those whose physical qualifications seemed best adapted to the particular instrument, and practice did the rest. In this way, such music as pleased the Indians and people of the country, and which therefore answered his purposes, was produced. The chapel is painted in fresco, or I should rather say daubed, by a young artist of Mexico. The saints are all represented in full costume, and the scenes depicted are those most likely to attract the attention and wonder of the neophytes. The whole has a gaudy and unsightly appearance. We parted from Padre Mercador at the church door, knowing it was about the hour of his noon service; and received from him a pressing invitation to visit him in the evening, to play a game of chess, of which he said he was very fond.

We now returned to the administrador, whom we found enveloped in his large overcoat, with a white nightcap on his head, waiting in his salle à manger to receive us, and afford us entertainment. Don Miguel gave us the secret of this movement, saying, that his wife, after our arrival in the morning, had persuaded him to go to bed; but he could not resist the opportunity that now offered itself, of telling his old stories over again to willing listeners; and we had scarcely taken our seats, before he began a full account of his birth, parentage, &c., and was about relating his adventures in full, when the bell tolled noon. He immediately sprang upon his feet, faced the south, and began to cross himself, and repeat a prayer with great volubility. In this exercise he continued for a few minutes, until he heard the last taps of the bell. Of this we took advantage to break up his discourse; which, notwithstanding sundry efforts on his part, we succeeded in doing, and it was not long before we heard he was again in bed. His deputy answered all our questions, and assured me that he was well acquainted with the concerns of the mission, for he had heard them very often repeated by the administrador during the last few years.

The deputy now conducted us through the garden, which is surrounded by a high adobe wall, and has a gate that is always kept locked. It was from one and a half to two acres in extent, and mostly planted with grapes, which are cultivated after the Spanish fashion, without trellises: some of the fruit was yet hanging, and was generally of the sweet Malaga kind. Our guide informed me that the mission took the first picking, for the manufacture of wine and to preserve, then the inhabitants, the women of the "gente de razon," and afterwards the children. Strict watch was, however, kept that they did

not pull the other fruit. Only a certain number are allowed to work in the garden, and the whole is placed under the constant superintendence of a gardener. It would be almost impossible to protect the fruit otherwise. They have fruit of all kinds, both of the tropical and temperate climate, which they represented as succeeding admirably well. A few barrels of wine are made, but nothing can be more rude than their whole process of manufacturing it. The tillage is performed with ploughs that we should deem next to useless; they are nothing but a crooked piece of timber, four to six inches square, somewhat in the shape of our ploughs, which merely serves to loosen the ground to a depth of three or four inches; but in such a soil, and in this level land, this rude implement answers the purpose, and produces crops on an average of from sixty to eighty for one. The ploughs are drawn by oxen, and are well adapted to the Indians, who more readily learn to use them than they would more complicated machines.

After spending some time in the garden, we were recalled to dinner; and if we had cause to complain of the slightness of the breakfast, the dinner made ample amends, every variety of dish being abundant and admirably prepared. Don Miguel congratulated himself and us that the administrador was not in a fit state to prevent us from enjoying it, by the everlasting narration of his adventures. Señora Aliza had quite surpassed even her usual good feasts in this dinner, which called forth much praise from our companion.

At the missions throughout the country four meals are daily taken: at an early hour, chocolate; at eleven o'clock, breakfast; at two, dinner; and at seven, supper. The dinner and supper are the principal meals, and at them the Californians indulge to a great extent.

After our meal was finished, Don Miguel, having some business at the Pueblo of San Jose, about a league from Santa Clara, he invited us to accompany him thither. After some difficulty in procuring horses, we set out on sorry nags, and on leaving the mission entered an avenue lined on each side with large trees. These I understood had been planted at an early day, by one of the padres, in order to protect the people from the sun during the celebration of the church festivals, and to leave no excuse to the inhabitants of the pueblo for not visiting the mission church.

Just before arriving at the pueblo, we crossed over one of the tortuous branches of the Rio Guadaloupe, some twenty feet wide, and had a view of the pueblo. It seemed as if this were a gala-day, and as if every one were abroad celebrating it on the banks of this river, or rather creek; the overflow of which had served to keep the grass green

for a considerable space around. Instead of its being a festival, it turned out to be the general washing-day of the village; and the long lines, trees, bushes, &c., were all hung with the many-coloured garments, which, with the crowds of men, women, and children, and some cattle, seen moving to and fro, or gathered in small groups, gave the whole quite a pleasing effect. I was told that the pueblo of San Jose had a larger number of inhabitants than any other in Upper California; but as we rode into it, it seemed almost deserted, and I would willingly have gone back and amused myself with the scene on the green, if Don Miguel had not represented to me, that his standing would be very much affected if we did not at once proceed to the alcalde's. We accordingly rode up to his house, a very pretty two-storied edifice, of a light-cream colour, in the centre of the main street, and directly opposite a new church that they are erecting. The alcalde gave us a cordial reception. His first appearance was that of a French pastry-cook, with his white cap and apron. He was a short, dapper, rosy-cheeked man, by birth a Frenchman, but had been now twenty years settled in the pueblo; was married, and had eleven children, who looked as healthy and as dirty as one would wish to see them. The moment he understood who his visiters were, he did us the honour to doff his white cap and apron; and shortly after appeared in a round-about, very much ornamented with braid, &c. The only name I heard him called by, was Don Pedro. He spoke his native language imperfectly, using a great many Spanish words with it, and told me that he had nearly forgotten it. From him I learned that the pueblo contained six hundred inhabitants, about forty of whom were whites. He described himself as the "sous-préfet," and said that he administered justice, inflicted punishment, and had the ability to make the inhabitants happy, as he thought they should be. On my asking, by what laws he administered justice, his answer was,—by what he thought right. He had very little trouble, except guarding against the attacks of the Indians and preventing them from stealing horses, of which he had great fears; he had, therefore, provided for the safety of his own by keeping them in a small shed attached to his house, and within a locked gate.

He considered the pueblo as in danger of attacks from the Indians, who were now in great numbers within striking distance, and had become very troublesome of late in driving off horses, of which they had lost three or four hundred, and he said that pursuit was impossible, as they now had no troops. I was not satisfied that the alcalde was the bravest man in the world, or that he thought much of the interests of those over whom he had sway. Don Miguel gave him the character of being a good customer, and generally punctual in his payments. He

entertained us with wine and beer of his own making, and showed us the copy-books of his children, who were in pot-hooks and trammels, which he looked upon as a wonderful advancement in the education of the country. Some half-dozen books were all they owned in the pueblo; but to make up for this deficiency, the alcalde told me they were all very happy, and that there were but few quarrels, for those in which stabs were inflicted did not occur oftener than once a fortnight. We took our departure a short time before sunset, amidst the gathering in of the villagers, with their goods and chattels, to a place of safety. There are two Americans settled here, who own mills, but I was not fortunate enough to meet with them; the alcalde, however, gave them good characters. The evening was a beautiful one, and we had a delightful ride back to the mission; and our horses, knowing they were on their return, were quite mettlesome.

The mode of conducting business in this country is peculiar. Vessels, on reaching the coast, employ as a supercargo or travelling agent, some person well known throughout the country, who visits all the pueblos, missions, and estancias, as a traveller, passing from place to place without any apparent object of business. He thus has an opportunity of inspecting the worldly affairs of those to whom he desires to sell; and if he finds them apparently thrifty, he produces his card of patterns, and soon induces a disposition on the part of his host or hostess to buy, being careful to secure in payment as much of their worldly goods as he can, and trusting them for the rest of the indebtedness. A few live cattle delivered by each purchaser at the neighbouring pueblo, become by this means a large herd, which is committed to cattle-tenders on shares, who in due time slaughter them and deliver the hides. A large amount of goods is thus disposed of, to a very considerable profit. Large cargoes, consisting of a variety of articles, of both American and English manufacture, are thus sold. From the state of the country, it has been difficult to obtain payments or returns in money; but the debts have been paid in cattle, and probably will turn out well, when the rains return and allow the animals to be again slaughtered. When hides are given in payment, they are valued at two dollars, and are at all times the common currency of the country. No money is in circulation, unless what is paid out by the foreign merchants; and in lieu of change, an extra quantity of goods is taken, which excess is usually to the disadvantage of the buyer.

On our return to Santa Clara, we had to procure horses for our journey back by land. We had been told by the administrador and his deputy, that there would be no difficulty in the mission providing us with horses and saddles; and under this assurance, we had de-

spatched our boats on their return to the ship, determining to make the ride of sixty miles the next day. We soon found that the mission horses were lame, and that they had strayed. These, with many other excuses, all showed us the dilemma we were in. Three or more messengers were pretended to be sent to the pueblo and the neighbouring estancias; and after much delay and several feigned disappointments, we were told that six animals might be procured. The exorbitant price of four dollars for each was asked for the use of these. A good horse may be purchased for eight dollars. As I at once saw the game that was in progress, I thought it better to comply with a good grace than perhaps to suffer farther imposition; so six were agreed for at four dollars each, for the next day. I was well aware that the deputy was deeply in the plot, and probably shared a part of the profits.

Being disengaged in the evening, we went early to Padre Mercador's to play chess, for which he has more love than knowledge. He had boasted not a little of his prowess, but after suffering defeat in three successive games, his opinion of his skill was somewhat lessened. He was in fact but a novice in the game. For refreshments we had brandy and wine, with cigars and fruit, of which the hospitable padre and Don Miguel both partook most freely, particularly the former. We remained until nine o'clock, when a message was brought us that supper was ready, and we retired, leaving Padre Mercador to resume the duties of his office. For his kindness and attentions we were greatly indebted to him; I wish I could say that his mode of life and the influence he exerts over his charge, also deserved commendation.

At the head of the supper-table, we found Donna Aliza, with a huge dish of smoking valdivias before her, and a variety of edibles, with an infusion of tea in small cups, which, at the request of Don Miguel, was added to until it became drinkable, but not without many exclamations against its extravagance. The poor husband was in bed, and Captain Hudson, who went to see him, finding that he was suffering from a severe cold he had taken, prescribed bathing his feet, and a strong glass of hot whiskey punch. Don Miguel accordingly prepared the latter, which was cheerfully taken by the patient, who shortly afterwards fell into a sound sleep. In the morning, we found that he was entirely recovered.

Our beds were clean and comfortable, though the apartment had a strong smell of cordovan leather. The only place of deposit for clothing, &c., was, as we had seen in the estancia, in large trunks. The matin-bell aroused us at early dawn, when we heard the full choir

practising. There was certainly nothing earthly in the sound, nor yet heavenly; much noise, but little music.

We were up betimes, but were threatened with disappointment in our horses. The kind and attentive Donna Aliza served us with chocolate and toast, and prepared cold tongues, chickens, and ample stores of bread for our use. At last the horses, together with the Indians who were to accompany us, made their appearance, and out of the number, I recognised at least three that belonged to the administrador, as I had been led to believe would be the case the evening before. His good wife ordered us their best saddles, but without the pillions or saddle-cloths.

After an hour's preparation, we took our leave and galloped off, in company with Don Miguel, who proposed to accompany us some six or seven miles, on our way to visit some of his herds, that were then feeding on the prairie. We had not proceeded far before we were overtaken by the person who had them in charge, coming at a furious gallop. He was mounted on the best horse I had seen in the country, and dressed after the Californian fashion, in a dark brown cloth jacket, thickly braided, both before and behind, with slashed sleeves, showing his shirt elegantly embroidered, both on the breast and sleeves; velvet breeches of bright blue, secured around his waist with a red sash, and open at the sides, ornamented with braid and brass bells, in abundance; below the knee he wore leather leggins, fastened with garters, worked in silver, and below these, shoes, over which were fastened large silver spurs, with the heavy rowels of the country; on his head was tied a red bandana handkerchief, and over that a huge broad-brimmed sombrero, with peaked crown, covered with an oil-silk cloth; the whole decorated with cords, aiguillettes, and ribands, with a guard-cord passing under the chin. His horse was equally well caparisoned, the bridle being decked with silver, as were the tips of his large wooden stirrups; with pillions and saddle-cloths in abundance. Few riders had so gay an air, or seemed to have so perfect a command of the animal he rode; and until we arrived at the wood where his Indians were looking out, he was an object of great attraction, assuming all the airs and graces of a person of high rank.

After galloping for several miles, we reached a few trees and bushes, that are designated as the "woods." Near by was a large herd of cattle feeding. The Rancheros we found lying about, in huts of hide, with a fire in front, and the leg-bone of an ox roasting over it; the skulls, bones, and offal, lay about, with hides here and there pegged to the ground.* Some score of dogs were disputing

* The hides of the cattle that die, or that are killed for food, are cured in this way.

over that last killed, and the ground around seemed alive with cranes, crows, &c., acting as scavengers, and disputing for their shares. There is no smell except that of raw beef; the climate is so dry that no putrid matter exists, but the sight is unpleasant enough to those who have not become accustomed to it.

Previous to setting out, we provided our saddles with extra sheep-skins; we now took leave of Don Miguel, with many thanks for his attentions, and a hearty shake of the hand. We soon found that our horses began to fag from the effects of our bad riding, and the fatigued and wretched condition they were in; and by the time we arrived at Las Pulgas, we found it necessary to change, and were glad to have a temporary relief from our saddles. Any one who has ever ridden upon a Californian saddle, with but a slender covering to it, will be able to understand our feelings. We were besides but ill provided for the trip, which our nags seemed not slow to discover. We had no well-armed heels, and were, besides, deficient in whips, both indispensable to a rider in California. The consequence was, that they could not be made to move along, without most laborious efforts of bodily strength.

The country we passed through was at this time destitute of both water and grass, and the weather uncomfortably warm. In places we found it picturesque, from the scattered oaks, laurels, &c., though to all appearance entirely unfit for cultivation. Wherever there was any running water, a pond, or vegetation, large flocks of geese and ducks were seen. At four o'clock, we entered the estancia of Señor Sanchez, to whom Don Miguel had given us a note of introduction, desiring that he would aid us if we wanted horses. We had looked forward to this point with hope, in the belief that our troubles in riding such forlorn beasts would terminate, and that our bodies as well as our minds would be set at rest.

The word estancia seems to give one an idea of something more extensive than a small farm: it sounds more noble and wealthy; but whatever had been our opinion before, the reality disappointed us. Señor Sanchez's estancia at a distance was quite a respectable-looking building; the broad shadow cast by its projecting roof gave it a substantial and solid appearance; but a nearer approach dispelled these favourable impressions, and showed its uncouth proportions, as well as the neglect in which the whole was kept. The way to the house, which stands on a knoll, leads through miry places, and over broken-down fences, winding around dilapidated ox-carts, over troughs, old baskets, dead hogs, dogs, and fowls, all huddled together. Rude articles of husbandry occupied the sides of the building. Seeing no one,

we dismounted, tied our horses, and began to search for inhabitants. All the houses were unfinished: to the doors of some there were no steps, and no floors to the rooms of others; the adobes were bare, and destitute of plaster or whitewash; and what was more disheartening, no inhabitants made their appearance. At last a slave was seen crawling from a wretched hole, whom we followed to the only place which yet remained unsearched, a distant corner of the premises, where we found the family, consisting of a mother and daughter. The latter was a nice-looking girl, to whom our note was handed, and who read it aloud to her mother, who did not recognise the name of Don Miguel. Whether this arose from design or ignorance, I know not; but the note produced no apparent effect: however, after a few compliments, and a little persuasion, through our servant, (who spoke Spanish well,) the mother was somewhat softened, and we procured a tumbler of milk and a tortilla; but we could not induce her to allow us to take from the fifty horses that were then in the coural, the few we required. Her constant answer was, that her husband was not at home, and she could not do it. We strayed about the kitchen, which was the only apartment fit for occupation, and warmed ourselves over the small fire that had been lighted, for the air was becoming chilly and damp. This apartment was lighted from the door and a small window; it was furnished with numerous stew-holes and ovens, which appeared very convenient for cooking; and above them were placed shelves, on which the pans of milk were resting. In the centre was a large mortar, and beyond it, at the far end, quite in the dark, the rude grist-mill of the country. To the long shaft of the mill a small donkey was harnessed. This place apparently answered also as a stable. The whole had quite a primitive look, and showed, at least, some comfort and forethought. During our examinations, in came the husband, very unexpectedly to his wife and daughter, as well as to ourselves. He had the face of a ruffian. After many suspicious looks and questions, he gave his consent, though very unwillingly, to supply us with horses. Lest it should be supposed that this man was the owner of the estancia, I must here say that Señor Sanchez was not at home; although I am not prepared to vouch, from what I heard afterwards, that our treatment at his hands would have been any better. We were told that it was but a short two hours' ride to Yerba Buena, and we hoped to reach it before dark. We therefore made haste to secure fresh horses, and soon took our departure. The horses were but sorry-looking animals, and I must own that the thanks for them were very difficult to utter.

We had scarcely gone beyond the "a dios" of our ill-looking friend, when the steed of Captain Hudson came to a stand, and no persua-

sion, whipping, or spurring, could induce him to move. It was then discovered that he was blind, and in attempting to move him we found he was lame also. My servant John was then directed to change, as he was the best horseman of the three, and after a trial of patience, succeeded in getting him along.

After dark we reached the house of Mr. Spears, at Yerba Buena. We were barely able to dismount, having had one of the roughest and most fatiguing rides I ever experienced. A warm welcome from our countryman at Yerba Buena, and a seat at his hospitable board, soon refreshed us. My boat being in waiting, we embarked, and reached the Vincennes at two o'clock in the morning, greatly fatigued, yet highly gratified with our jaunt to the mission of Santa Clara.

Finding all those belonging to Lieutenant Emmons's party had now joined the ship, preparations for sea were at once made. I shall now take up the operations in Southern Oregon, which will form the subject of the following chapter.

SACRAMENTO INDIANS GAMBLING.

CHAPTER VI.

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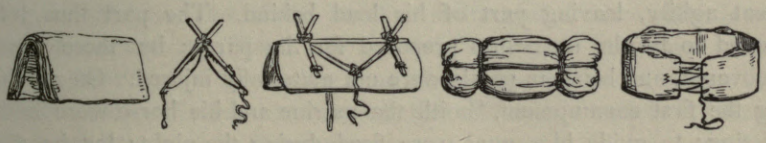
CHAPTER VI.

SOUTHERN OREGON.

1841.

The last chapter closed with the arrival of Lieutenant Emmons and his party at San Francisco. I shall now give some account of the operations of this party, and of the country they passed through. The difficulties which were experienced in the organization of the party, have already been alluded to in another place, and need not be repeated. There remain to be described some of the articles of his equipment, in the preparation of which much time was consumed, and which were absolutely necessary for the success of the expedition. The principal part of the provision was flour; this is packed in sacks; the sacks are again enclosed in a "parflesh" made of hide, to protect them from being torn to pieces by the boughs of trees and underwood; this rests upon a pack-saddle, by which the load is firmly secured on the horse; while, to protect his back from injury, a thick saddle-cloth called "appichemens" lies beneath the pack-saddle. These articles are represented in the annexed cut.



APPICHEMENS. PACK-SADDLE. SACK. PARFLESH.

To these are to be added the trail-rope and lash-cord, six or eight fathoms in length. These trails drag on the ground, and are intended for the purpose of catching the horses. Now, all these articles were to be prepared in a country where no mechanic is to be found; and

so indispensable are they, that any party which sets out without them would in all probability be compelled to return.

Our gentlemen, when they left Vancouver, proceeded by the way of the Hudson Bay Company's farm on Multunomah or Wapautoo Island, which is near the place where Captain Wyeth had erected his fort. They then crossed the river and went towards the Faulitz Plains, passing on their route a large grazing farm belonging to the Company, and those of many settlers. From these they were supplied with fresh horses. They found the country beautiful, and the land rich. Their route lay over hills and through prairies. The hills were wooded with large pines and a thick undergrowth of rose-bushes, Rubus, Dogwood, and Hazel. The prairies were covered with variegated flowers, and abounded in Nuttallia, Columbines, Larkspurs, and bulbous-rooted plants, which added to the beauty, as well as to the novelty of the scenery.

Some sickness had made its appearance among the members of the party. Messrs. Emmons, Peale, Rich, and Agate, all had attacks of ague and fever, and the two last-named gentlemen suffered much from this disease. Dr. Whittle ascribed these attacks to the length of time, nearly five weeks, during which they had been encamped on the Willamette, and particularly to the position of the camp, immediately on the bank of the river, where it was subject to the damp and fogs.

When the party set out, new difficulties arose from the fact that the horses had for some time been unused to saddles or packs, and from the awkwardness of the riders. Corporal Hughes of the marines, one of the party, was thrown from his horse, which took fright at some wild animals crossing his path. The pack-horses were missing, and caused much difficulty in hunting them up; one, when found, had waded into a creek with pack and all, and stood there with only his head out of water. At this an old hunter became enraged, and springing into the water, thrust his thumb into the horse's eye; the pain of which treatment caused the animal to leap up the opposite bank with great agility, leaving part of his load behind. The part thus left proved to be the medicines prepared for the party; but these were recovered, and being in phials were not materially injured. On reaching the first encampment, Smith the marine and his horse were both missing: to guide him, guns were fired during the night; but he did not make his appearance. In the morning, parties were sent in search of him and the pack-animals. In the afternoon, the marine made his appearance, without any other loss than the ramrod of his musket; he had passed the night in the woods. This same man, a day or two after, reported to Lieutenant Emmons that he had lost his riding-

horse: he was very properly told to go in search of him, and if he could not find him, to return to Vancouver, as he was too helpless to be of any use. This had the desired effect, and from that day forth, he proved a useful man. There were many other annoyances and difficulties that Lieutenant Emmons's patience and perseverance overcame.

During the time of their stay, Mr. Agate made many sketches. One of these is of a burying-place, which I have thought worth inserting, as exhibiting one of the peculiar features of a race which is now fast disappearing. The mode of burial seems to vary with almost every tribe: some place the dead above ground, while others bury their departed friends, surrounding the spot with a variety of utensils that had been used by the deceased.

The graves are covered with boards, in order to prevent the wolves from disinterring the bodies. The emblem of a squaw's grave is generally a cammass-root digger, made of a deer's horns, and fastened on the end of a stick.

From the delay of the party in the Willamette Valley, they became

well acquainted with the various characters of the people who were settled there. They generally consist of those who have been hunters in the mountains, and were still full of the recklessness of that kind of life. Many of them, although they have taken farms and built log houses, cannot be classed among the permanent settlers, as they are ever ready to sell out and resume their old occupation, when an opportunity offers. Our party found them, with one or two exceptions, well disposed.

The gentlemen of the party, who had more time and opportunity to become acquainted with the operations of the missionaries than I had, were less favourably impressed than myself. One of the principal complaints of the settlers against the members of the mission was, that they never had any religious service, although several ministers of the mission were unemployed. This complaint, however, could not be made on our part; for, the first Sunday the party was encamped, the Rev. Mr. Leslie invited them all to his house for that purpose, which invitation was accepted. Tibbats, one of the party, was sitting by an open window during the sermon, and, as many have done before him, was nodding, in which motion he threw his head back and struck the stick that supported the sash, which coming down suddenly, caught him by the neck. This accident occasioned no small disturbance in the congregation, but no injury resulted from it to the man, who was inclined to join in the laugh that unavoidably took place after he was extricated. This anecdote will show the character of the class of settlers which the missionaries would have to deal with, and I am inclined to believe that for the neglect of duty imputed to them, those who make the charge are themselves chiefly to blame.

It was the general impression of our party, however, that the field for a mission was but small, and not sufficient to warrant the expenses that have been lavished upon it. Their school was in operation, and included twenty pupils in all. Dr. Babcock mentioned to one of our gentlemen that he had a native boy for a servant, of whose qualifications and education he spoke, saying that it was a great trouble to get him into cleanly habits, such as washing his face and hands in the morning, before he milked the cow. He next taught him to make a fire, boil a tea-kettle, and make tea; he then taught him to fry and bake; he could wash clothes, and would in a short time be able to iron.

All our gentlemen experienced the same kind treatment and good fare that I have before spoken of, and nothing seemed to be wanting in the way of substantial comforts.

The party, including Passed Midshipmen Eld and Colvocoressis, Messrs. Dana, Brackenridge, and the sergeant, proceeded up the Willamette river. They reached Champooing on the 3d, where they disembarked. In the morning they were taken to the house of Thomas M'Kay, who is one of the most noted persons in this valley, particularly among the mountain trappers. He is a man of middle age, tall, well-made, and of muscular frame, with an expression of energy and daring, and a deep-set, piercing black eye, beneath a full projecting eyebrow. Among the trappers he is the hero of many a tale, and is himself prone to indulge his guests with his personal adventures. He lives in a house that answers both for a dwelling and grist-mill, and is said to be the best belonging to a settler in the valley. This man was engaged to go as guide; and, what speaks little for his veracity and principles, at the last moment refused to do so, and afterwards made his boast that he had fooled the party, as he had not intended to go from the first. His harvest had just been reaped, which he said had produced him twenty-five bushels to the acre. M'Kay furnished them with horses, and accompanied the party to the camp, where they arrived early in the afternoon. Here all was preparation for a speedy departure, and every one fully occupied with packs, saddles, and trappings. On the 7th, the party made their final move, and after travelling only six miles, encamped near Turner's, known as the mission butcher. He owns a farm, in the acceptation of the word in Oregon, having a log-hut, an Indian woman to reside in it, and an undefined quantity of land. The hut contains no furniture to sit or lie upon, and only the few articles most needed in cooking. He does not cultivate any thing, but supports himself by killing cattle semi-weekly. Report says that he was formerly a drummer in the United States service, but for upwards of thirteen years he has led the sort of life he now does. He seems both contented and independent, and appears an honest and good-natured fellow. He has had several narrow escapes, having been twice with parties that were attacked by the southern Indians, in the passage to and from California. The last time he was one of four who escaped, subsisted on berries and roots for a fortnight, and was obliged to travel only at night, to avoid the Indians who were in search of him. He furnished our party with fresh beef of his own stock, refusing to receive pay, and seemed very much incensed that the mission should have charged for what had been obtained from them.

The country in the southern part of the Willamette Valley, stretches out into wild prairie-ground, gradually rising in the distance into low undulating hills, which are destitute of trees, except scattered oaks;

these look more like orchards of fruit trees, planted by the hand of man, than groves of natural growth, and serve to relieve the eye from the yellow and scorched hue of the plains. The meanderings of the streams may be readily followed by the growth of trees on their banks as far as the eye can see.

They were detained here by the straying of their animals, and did not succeed in getting off until the next day, when Turner gave them two of his horses, being willing to run the risk of recovering the lost ones in their stead.

On the morning of the 9th, they had a severe frost. In the course of the day they passed Creole creek, and encamped on the Ignas. The atmosphere during the day had become quite thick, owing to the smoke arising from the burning of the prairie. Here they prepared themselves fully for their journey, by trimming their horses' hoofs, and taking a full account of them. The soil was a red decomposed basalt, well adapted for grazing and wheat lands.

On the 10th, the country was somewhat more hilly than the day previous, but still fine grazing land. During the day they crossed many small creeks. The rocks had now changed from a basalt to a whitish clayey sandstone. The soil also varied with it to a grayish-brown, instead of the former chocolate-brown colour, which was thought to be an indication of inferior quality. The country had an uninviting look, from the fact that it had lately been overrun by fire, which had destroyed all the vegetation except the oak trees, which appeared not to be injured.

On the 11th, after passing during the day Lake Guardipii, which is about five hundred yards long, they encamped on the Lumtumbuff river, which is a branch of the Willamette. This river is a deep and turbid stream, branching out in places like a lake, but being in general narrow and fordable.

On the 12th, the route was across a parched-up prairie, some portions of which were composed of gravel and white sand, mixed with clay. The paths were very rough, owing to the soil, which was much cut up by the herds that had been driven through; and which, on becoming hard, was exceedingly fatiguing to the horses. Bands of wolves were met with, and were heard throughout the night howling in various parts of the prairies. The cry of these animals is peculiar: one sets up a long shrill whine, three or four join in, and in a few moments afterwards, the whole pack utter a sort of sharp yelp, which gives the idea of a half-laughing, half-crying chorus. The party had hitherto made from fifteen to twenty miles a day; and in travelling this day, the animals suffered a great deal from want of water. They

encamped on the Malé creek, which was about thirty feet wide, and ran in a northerly direction.

On the 13th, they had much difficulty in finding their horses, which had escaped the guards at night, owing to the thick fog that prevailed. They were in consequence unable to go forward until three o'clock in the afternoon; some of the animals had gone six miles back on the trail in search of water, and were found in the vicinity of marshy places. Messrs. Emmons and Eld had employed the hours of this detention in getting dip and intensity observations. In consequence of this mishap, they were unable to make more than two miles during the day, which continued hot and foggy.

Some wandering Callapuyas came to the camp, who proved to be acquaintances of Warfields' wife: they were very poorly provided with necessaries. Mr. Agate took a characteristic drawing of one of the old men.

COSTUME OF A CALLAPUYA INDIAN.

These Indians were known to many of the hunters, who manifested much pleasure at meeting with their old acquaintances, each vying with the other in affording them and their wives entertainment by sharing part of their provisions with them. This hospitality showed them in a pleasing light, and proved that both parties felt the utmost good-will towards each other. The Indians were for the most part

clothed in deer-skins, with fox-skin caps, or cast-off clothing of the whites; their arms, except in the case of three or four, who had rifles, were bows and arrows, similar to those I have described as used at the north; their arrows were carried in a quiver made of seal-skin, which was suspended over the shoulders.

On the 15th, they reached the base of the Elk Mountains, which divide the valley of the Willamette from that of the Umpqua. The ascent and descent of this ridge are both gradual, and the hills were covered with pines, spruces, and oaks, with a thick undergrowth of Hazel, Arbutus, Rubus, and Cornus. Through these thickets they were obliged to force their way along the back of one of the spurs, and were three hours in reaching the top, which was fifteen hundred feet above the level of the plain. A species of Castanea was met with, whose leaves were lanceolate and very rusty beneath; the cup of the nut was very prickly.

The route over the Elk Mountains was very serpentine, owing to the obstruction caused by fallen timber, many of whose trunks were four and five feet in diameter. Previous to ascending the mountain, they had crossed several small streams over which the Hudson Bay Company had constructed bridges for the passage of their sheep. Much trouble was caused by the necessity of dragging a number of their pack-horses with lassos from a miry pool into which they had plunged. At the encampment, during the night, ice made on the pools to the thickness of a quarter of an inch, and the thermometer had fallen to 26°. The soil on the Elk Mountains is hard and dry; on the ridge, rock is nowhere exposed to view, and only a few fragments of sandstone lie on the surface; where they made their descent, however, and in the banks of the streamlets, they saw the rock finely developed in horizontal layers. The soil also was more sandy and of indifferent quality, and the grass in consequence is thin and occasionally mixed with ferns.

On the 16th, they encamped on the Elk river. The hunters were successful in killing a large elk, which was brought into camp and divided. Lieutenant Emmons, Mr. Agate, and Sergeant Stearns, with a Canadian as guide, left the encampment for Fort Umpqua, which was fourteen miles distant. The country for the first five miles was hilly, with scattered patches of pines, and it appears in places to be suitable for cultivation; the rest of the distance was over a country much broken. The trail carried them over a succession of steep hills and through deep ravines, which at times appeared almost impassable to their broken-down beasts; four of which Lieutenant Emmons was taking with him to exchange. They did not reach the

bank of the river opposite the fort, until between eight and nine o'clock. On the opposite side they perceived a fire, with some figures passing to and fro. By firing guns, and employing the stentorian voice of their guide, it was made known that our party was in want of two canoes to cross the river. The person in charge of the fort, Mr. Gangriere, had suffered much alarm, until he recognised the voice of Boileau, their guide, which had served to quiet him, and he at once directed the canoes to cross over; while these were sought for, the horses were hobbled, and the accoutrements made up, ready for transportation. Fort Umpqua was, like all those built in this country, enclosed by a tall line of pickets, with bastions at diagonal corners; it is about two hundred feet square, and is situated more than one hundred and fifty yards from the river, upon an extensive plain; it is garrisoned by five men, two women, and nine dogs, and contains a dwelling for the superintendent, as well as store-houses, and some smaller buildings for the officers and servants' apartments.

At the time of the visit, an unusual number of Indians of the Umpqua tribe had collected around; and Mr. Gangriere said, had shown a strong disposition to attack and burn the fort. He stated that hostility to the Company and the whites generally, arose from the losses they had met with from the small-pox, which they said had been introduced among them by the Company's parties under Michel and M'Kay; and their anger was much increased by his refusal to supply them with ammunition. So critical did he consider the state of affairs, that he was about to despatch a messenger to Vancouver, to inform Dr. M'Laughlin of his situation; he had not ventured to leave the fort for many days.

Mr. Gangriere, besides entertaining Messrs. Emmons and Agate with tea, &c., gave them an account of the dangers they had to pass through. He informed them that he had long before heard of the intended journey, through the Indians, and that the news had passed on to all the tribes, who were collecting in vast numbers to oppose their passage, having sworn vengeance against all the whites, or those connected with them. He also stated that within a short time they had murdered two half-breeds who had been living peaceably among them, but who had been formerly employed by the Hudson Bay Company. By way of making his story more credible, he said that the Shaste Indians had sent him word that they were lying in wait for the whites when they should come. Large numbers of the Umpquas, according to him, had assembled at the usual crossing, to arrest the progress of the party, and he advised Lieutenant Emmons to cross the

river at a place higher up. Mr. Gangriere furthermore thought their numbers so small that he was sure they would be all killed.

Lieutenant Emmons places the fort in latitude 43° 24′ N. From the account given by Mr. Gangriere, the river pursues a northwesterly course, and runs a distance of thirty miles before it enters the sea. It is navigable from the ocean to the place where the Umpqua and Elk rivers unite, about three miles below the fort, for vessels drawing not more than six feet water. The mouth of the Umpqua offers no harbour for sea-going vessels, and has only nine feet water on its bar. Its entrance is very narrow, with low sands on the north and south sides.

The Umpqua country yields a considerable supply of furs, and principally of beaver, most of which are of small size. The regulations of the Company do not seem to be so strictly in force here as to the north of the Columbia, in relation to buying the small skins. These, I have understood, they refuse to purchase there; and every Indian who is found with a small skin is refused supplies of ammunition, which has been found sufficient to prevent the killing of the young animals. Here they also obtain from the Indians some land and sea otter, deer, and bear skins.

UMPQUA INDIAN GIRL.

Mr. Agate made a sketch of one of the girls of the Umpqua tribe, of which the above wood-cut is a copy.

The agent at this post obligingly exchanged the horses, and supplied

Lieutenant Emmons with some bear and deer skins, which several of the party were in want of to make into shirts and trousers; Dr. M'Laughlin having kindly sent Lieutenant Emmons, before he left the Willamette, a letter to his agent, desiring that he would afford the party all the assistance in his power.

Lieutenant Emmons and Mr. Agate were accommodated in the store, with beds made of blankets. After arranging them, Mr. Gangriere wished them good night, locked the door, put the key in his pocket, and went to his lodgings. In the morning, at daylight, they were released.

The day was cold, damp, and foggy, preventing them from seeing any distance from the fort. The river is here one hundred and twenty yards wide, quite rapid, filled with rocks, and only navigable for canoes. The soil in the vicinity is very good, producing plentiful crops of corn, wheat, and potatoes. In the garden attached to the fort, are grown all the common vegetables of the United States, with melons, both water and musk. Cattle are said to thrive well.

In the morning it was found that a number of the Indians had departed, which relieved the agent's fears for himself, but increased those for our party. He was satisfied that it was too small in number to pass safely through, or overcome the resistance the Indians had prepared to oppose to them.

Few of these men seem to know the reason of the whites meeting with so few mishaps in passing through an apparently hostile country; and many deem that it is owing to their own skill and prowess. The truth is, that as soon as the Indians have traded with the whites, and become dependent on them for supplies, thenceforward they can be easily controlled. If disposed to be hostile, the fort at Umpqua would offer no resistance to their attack; but they are aware that all their supplies of ammunition, tobacco, blankets, and other articles of necessity, would be at once cut off; which would reduce them to great distress. They also know, that in all probability they would receive a severe chastisement for such aggression, from an armed force that would forthwith be sent among them. The self-interest of the Indians is, therefore, the true safeguard of the white traders.

After effecting the exchange of horses, they discovered that two of those they had hobbled the evening before had escaped; after a three hours' search, they were finally found on the back-trail, several miles from the fort. About noon they set out on their return, having under their escort the Indian wife of the agent, who wished to visit the camp to consult the doctor. Their fresh horses enabled them to get over the bad road with less difficulty than they had found on their way to the fort.

The party, in the mean time, had not been idle: preparations had been made for the probable encounter with the Indians; cartridges filled, and balls run, to the amount of fifty rounds apiece; the elk and deer meat had been jerked over a slow fire, and put into packs for transportation.

The examination of the country surrounding the camp, engaged the attention of the naturalists; many seeds and plants were collected. A species of oak, new to our gentlemen, was first seen here: in its size and appearance, it resembles that of the Willamette, excepting the lobes of the leaves, which have a spire at their termination; and the acorns, which are larger and more deeply set in the cup. A yellow honeysuckle was also found on the banks of the river.

The bed of the river is here composed of sandstone and clay-slate; a few hundred yards higher up the stream, the slate disappears, and beyond it is found basalt. The basaltic hills are only half a mile distant from the sandstone range which they had just passed. A few nodules of limestone, similar to that found around Astoria, occur in the shale. This rock contains a few fossils, and the sandstone exhibits some indistinct impressions of vegetables, and seams of coal or lignite. Mr. Dana, however, is of opinion that it is not probable a large deposit of the last-named mineral will be found here.

Many friendly Indians had come into the camp, who reported that the hostile tribes were preparing to attack them and dispute their passage. Some alarm seems to have existed among the trappers which manifested itself in sullenness, accompanied with threats of leaving the party. The ostensible reason for their dissatisfaction was that they were not permitted to fire their pieces at all times about the camp. Their real motive was the hope of retarding our party until it should be overtaken by the Company's trappers under Michel, who were about sixty in number. Boileau's fears had been so worked upon that he determined to leave his wife at Fort Umpqua until Michel should pass by. As usual, they suffered some detention in the morning from the straying of their horses.

Soon after leaving their camp, Corporal Hughes was taken with such a violent chill, that he was unable to proceed. The doctor, with a party under Mr. Colvocoressis, waited until the chill had subsided, and then rejoined the party.

Their guide now expressed to Lieutenant Emmons his desire to leave the party, on the plea of solicitude for his little child, but, in reality, because they were now about entering into the hostile country. After some talk, however, his fears were quieted, and he consented to go on.

During the day they passed over some basaltic hills, and then

descended to another plain, where the soil was a fine loam. The prairies were on fire across their path, and had without doubt been lighted by the Indians to distress our party. The fires were by no means violent, the flames passing but slowly over the ground, and being only a few inches high.

They encamped on Billey's Creek, named after a man who had been killed here by a grisly bear, whilst passing through with a party belonging to the Company. Large game was seen in abundance, and Guardipii brought in an elk as large as a good-sized horse.

On the 19th, Burrows and his squaw, who had the night before made up their minds to leave the party, determined to continue with it. Lieutenant Emmons, in order to avoid any chance of an encounter, now deviated from the direct road, and took the upper ford or pass across the Umpqua, as he had every reason to believe that the Indians had made preparations at the lower one to obstruct his passage. About noon they reached the north fork of the Umpqua, and succeeded in fording it without accident, though they experienced some difficulty in consequence of its rapid current and uneven slippery bottom. Its breadth is about eighty yards, between banks from fifteen to twenty feet high; its depth varies from one to five feet.

As many of the party were very unwell, Lieutenant Emmons determined to halt, and the party encamped in a beautiful oak grove. With the geological features of the country, the botany had also changed; and this was also found to be the case with the animals. A new shrub was met with, resembling the shrubby geranium of Hawaii. A beautiful laurel (Laurus ptolemii,) with fragrant leaves; a Ceanothus, with beautiful sky-blue flowers of delightful fragrance; a tobacco plant (Nicotiana), of fetid odour, with white flowers. For further information, I must refer to the Botanical Report.

On the Umpqua, the first grisly bears were seen; here also the white-tailed deer was lost sight of, and the black-tailed species met with. Elk were seen in great numbers.

Two Indians made their appearance on the opposite bank of the river, and were desirous of coming into the camp; but deeming that their object was to spy out the strength of the party, it was thought more prudent not to permit this; they were accordingly motioned off. At this encampment, the horses fared badly; for it became necessary to fetter them to prevent them from being stolen, as these Indians are notorious thieves.

On the 20th, they resumed their route at an early hour, and passed, during the day, through valleys and over narrow plains, that afforded good pasturage for cattle. In the course of two hours, they reached

the south fork of the Umpqua, which is similar in character to the northern.

During this day's ride, they saw one grisly bear, and had an encounter with another. On the first being perceived, chase was given, but he escaped, and while pursuing him, the second was seen. He was of large size, and approached within one hundred yards of the party, in their usual slow pace. As they came nearer to him, he raised himself on his hind quarters, and looked, with a cool indifference, upon the party. Mr. Peale dismounted and fired at him, upon which he ran off, under a shower of balls from the rest of the party, many of which hit him. They did not, however, succeed in killing him, and he finally made his escape.

They encamped on the south branch of the Umpqua river, after having passed along its eastern bank for some miles.

On the 21st, their route along the bank of the stream was through a country of the same description as before. They were approaching gradually the Umpqua Mountains, and stopped at the place where it is usual to encamp, previous to making the ascent. During the day they passed several deserted Indian huts, and met with some Indians, who were desirous of joining the camp. They declared themselves friendly to the whites, and were anxious to obtain powder and ball, which, however, were not furnished them. They were armed with guns, bows, and arrows, and were very particular in their inquiries about the time that Michel's party was to be expected.

During the night, an armed Indian was found lurking about the camp. He was recognised as an acquaintance by Warfields, one of the trappers; and on expressing his desire to accompany the party to California, permission to do so was given him by Lieutenant Emmons.

It now became evident that the Indians were on the watch to take advantage of any want of vigilance. The trappers had all become contented, and seemed quite willing to do their duty. They well knew that they had now entered a hostile country, and that it would be dangerous for any one to straggle or desert.

On the 22d, they began their route across the Umpqua Mountains. The ascent was at first gradual and easy; the path was quite narrow, and lined with dense underbrush, through which they were at times obliged to cut their way. The party were obliged to follow each other, and formed a line of nearly a mile in length. The path was continually rising and falling, until they came to a steep bank, ascending very abruptly to the height of one thousand feet. This occasioned many of the pack-horses to stumble, but without any material accident.

On the top was a small grassy plain, along which they travelled for a short distance, after which they descended rapidly into a valley where water was found. The most difficult part of the day's journey was the ascent from this valley, to effect which they toiled for three hours. The woods had been lately on fire here, and many of the trees were still ignited. This fire had evidently been lighted by the Indians for the purpose of causing the trees to fall across the path; they had also tied some of the branches together, and interlocked others. Every thing was charred, and the more annoying on that account, as our people were completely covered with charcoal dust. From the summit of this ridge, a view is had of a confused mass of abrupt ridges, between which lie small and secluded valleys. The whole range is thickly wooded, with a variety of trees, among which are the Pinus Lambertiana, (the first time it had been met with it,) Oaks, Arbutus, Prunus, Cornus, Yews, Dogwood, Hazel, Spiræa, and Castanea. In different directions, dense smoke was seen arising, denoting that these savages were on the watch for the party, and making signals to muster their forces for an attack, if a favourable opportunity should offer.

The Pinus Lambertiana, of Douglass, was not found quite so large as described by him. The cones, although fourteen inches long, were small in circumference.

They encamped on the plain of the Shaste country, which is divided by the mountains which they had passed, from the Umpqua Valley. The greatest elevation of those mountains, by the boiling temperature of water, was one thousand seven hundred and fifty feet. On reaching the encampment, it was discovered that Mr. Peale had met with the loss of a considerable part of his luggage, in consequence of the pack having been torn open by the bushes. It was therefore resolved to remain half a day at this place, in order to send back and seek for it, as well as to give the horses time to recover from the fatigue they had undergone. The 23d was therefore passed quietly, while a small division went back to search for the missing articles; but the only one which they succeeded in finding, was the camera lucida. Some Indians were met with, who no doubt had picked up all the rest of the missing articles; but as their language was unintelligible to the guides, no questions could be asked, nor any information received from them.

The rocks in this neighbourhood are here and there intersected with veins of quartz, and masses of that mineral are found strewn over the whole country. The soil that lies above the talcose rock is gravelly, and generally of a red brick-colour. Our botanists collected, during the day, many seeds. In the way of plants, they found the bulb which is used in California in the place of soap.

Their journey was resumed at an early hour on the 24th. The route passed through thickets, and in some places they discovered the fresh track of Indians, in searching for whom they discovered three squaws, who had been left when the others fled. It thus appeared that the Indians were watching them closely, and it was certain that in this country, a very small number of them would have been able to cut off the whole party without much injury to themselves, if they had possessed any courage.

The greater part of the day's journey was over undulating hills; and after making a distance of twenty-three miles, they encamped on Young's creek. This is a run of water, a few yards wide and a foot or less deep; it may be traced for a long distance by the trees which border it. They had now reached the country of the Klamet Indians, better known as the Rogues or Rascals, which name they have obtained from the hunters, from the many acts of villany they have practised. The place of encampment was only a short distance from that where Dr. Bailey was defeated.

On the 25th they continued their journey over a country resembling that traversed the day before, with the exception that the wood was not so thick. The Pinus Lambertiana was more common; the trees of this species were not beyond the usual size of the pine tribe, but their cones were seen fifteen inches in length. Some of the sugar produced by this tree was obtained: it is of a sweet taste, with a slightly bitter and piny flavour; it resembles manna, and is obtained by the Indians by burning a cavity in the tree, whence it exudes. It is gathered in large quantities. This sugar is a powerful cathartic, and affected all the party who partook of it; yet it is said that it is used as a substitute for sugar among the trappers and hunters. The soil passed over was loose and light, approaching a sandy loam.

In the afternoon they entered on the plains of Rogues' or Tootootutnas river, and encamped on its banks. This is a beautiful stream, upwards of one hundred yards in width, with a rapid current, flowing over a gravelly bottom at the rate of three miles an hour: it abounds in fish, on which the Indians principally subsist; the banks are low and overgrown with bushes for some distance from the stream; the soil is poor and sandy. Two or three hundred yards from the river, there is a sudden rise of ten feet, and another at the same distance beyond, from the last of which the land rises into hills from six hundred to a thousand feet in height. On these hills the soil changes to granitic sand.

Inass, the Indian hunter, being in search of game at some distance from the camp, killed a deer, and while in the act of skinning it, was

surprised by a party of Indians, who shot a flight of arrows over him; he at once sprang to his horse, seized his rifle, and, according to his own account, killed one of them. The utmost haste was necessary to effect his escape, and he left his game behind.

Towards night, a canoe with two Indians approached the camp, which they were not suffered to enter. These canoes were dug out square at each end, and quite rude.

In the morning they found within their camp an Indian basket with roots, which they supposed to have been left there during the night by some Indian whose curiosity was so great as to induce him to peril his life to satisfy it.

The 26th, they passed along the banks of the Rogues' river, which runs on in a westerly direction; upon it the Indians were seen spearing salmon from their canoes.

Within a short distance of their camping-place, they came upon a party of about fifty Indians, who seemed to be surprised that their hiding-place had been discovered. They appeared to be unarmed, and looked very innocent.

During the day, their course was northeasterly, along the banks of the river. About a mile from the camp, granite of a light colour and a fine grain, that would serve as a beautiful building-stone, was seen in places. As they proceeded, the valley of the river was encroached upon by the mountains, and the ground became very much broken. The river, also, flowed in rapids, owing to the same cause, and its banks became projecting and jagged rocks. A place was pointed out where a former party had been attacked and defeated with great loss, in consequence of the Indians being able to conceal themselves behind the rocks. Our party found no one to oppose their passage. In the afternoon they reached the forks, and took the southern one, which brought them to Turner's encampment, where his party were attacked, and most of them massacred. They had allowed the Indians to enter the camp in numbers, when they suddenly rose upon the whites, who were but nine in all, and were, at the time of the attack, attending to the horses. Two of the party were killed immediately. Turner, who was a strong athletic man, was seated by the fire when the fray began; he snatched up a brand, and defended himself, dealing destruction around him, until his wife brought him his rifle, with which he killed several. A large fallen tree lies near the spot, at one end of which Turner stood, while the Indians occupied the other, and whence, assisted by his wife, he made such havoc among them, that they at last retreated, and allowed Turner and his wounded companions to make good their retreat to the north. They returned to Willamette with the

loss of all their horses and property. There are still human bones, and among them parts of skulls, that mark the spot where this deadly strife took place.

Two Indians came into the camp, who were said to be friendly, having often visited the Company's parties. One of them had a kind of coat of mail, to protect himself from arrows. It resembled a strait-jacket, and only covered the body, leaving the arms free. It was made of sticks as large as a man's thumb, woven together so closely as to resist the force of arrows. It consisted of two parts, fastened together with shoulder-straps at the top, and secured around the waist at the bottom.

On the opposite bank of the Rogues' river some Indians were seen at a fire; but on the discovery of our party, they removed farther from the river. Shortly afterwards, a small dog belonging to them came down to the river bank, when a man, by the name of Wood, took his rifle, and, contrary to the orders and rules of the camp, shot it. Lieutenant Emmons had discharged the man a few days before for some misbehaviour, and he would have been turned out of camp, if there had been any place of safety for him. It was now sufficiently evident why the Indians had removed immediately out of gunshot. During the night, the Indians collected within hearing of the camp, and had a war-dance.

Most of the gentlemen of the party had suffered exceedingly from attacks of the ague; the chills were very violent while they lasted, and several were obliged to stop for an hour or two during their continuance. This became a source of uneasiness to the whole party; for it was necessary to pass on rapidly, and not delay the main body more than was unavoidably necessary: the sudden and great atmospheric changes which constantly occurred, tended to aggravate, if they did not produce, these attacks: the thermometer during the day frequently standing above 80°, and at night nearly as low as the freezing point.

On the 27th, they proceeded along the bank of the river. The Indians were observed to be gathering, and were heard to utter yells, on the opposite bank. After a while, a large band of them were seen near a rocky point which encroaches upon the river, and where the path came within the reach of their arrows. The party now had strong reason for apprehending an attack; Lieutenant Emmons, therefore, took such precautions as were necessary to clear the path from any dangers, by throwing a detachment on foot in advance of the main party. Here the high perpendicular bank confined the path to very narrow limits, rendering a passing party liable to be seriously

molested by an attack from Indians, who might conceal themselves from view among the rocks on the opposite side of the rapid and narrow river. No attack, however, took place, as the Indians perceived the disposition that was made to prevent it. After the party had gone by and were beyond rifle-shot, they again made their appearance, and began to utter taunts, which were coolly listened to, except by the females of Mr. Walker's family. The squaws (wives of the hunters) had prepared themselves for an attack, apparently with as much unconcern as their husbands. Michel La Framboise with his party had been twice assaulted at this place. A few miles beyond they left the banks of the Rogues' river, taking a more easterly route, over a rolling prairie which is bounded by low hills, resembling the scenery of the Willamette Valley. The soil, in some few places, was good; but generally gravelly and barren. On the plain, some Indians were seen at a distance, on horseback, who fled like wild animals the moment they discovered the party. Some of the horses began now to give out, and they were obliged to abandon them. In the afternoon, they encamped on Beaver creek, so named by Lieutenant Emmons, from the number of those animals that were seen engaged in building dams.

An antelope was killed, which was one of four that the hunters had seen; it was of a dun and white colour, and its hair was remarkably soft. The Indians take this animal by exciting its curiosity: for this purpose they conceal themselves in a bush near its feeding-grounds, and making a rustling noise, soon attract its attention, when it is led to advance towards the place of concealment, until the arrow pierces it. If there are others in company, they will frequently remain with the wounded until they are all in like manner destroyed. This species of antelope, according to the hunters, only inhabit the prairie, being seldom seen even in the open wooded country. The flavour of the meat was thought to be superior to that of the deer.

A species of rabbit or hare was seen in great numbers on the high prairie; their large ears had somewhat the appearance of wings. The Indian mode of capturing them is by constructing a small enclosure of brush, open on one side, and having a small hole through the opposite side, into which they are driven.

It was observed too that many of the pine trees had their bark pierced in many places, with cylindrical holes about an inch and a half deep. In some of these an acorn, with its cup end inwards, was inserted, which was supposed to be the provision stored away by some species of woodpecker.

On the 28th, they advanced to the foot of the Boundary Range,

where they encamped. The soil and country resembled that passed over the day before, and the woods were also oak and pine, but none of the Lambertiana. On the hills granite is seen to crop out, and in the distance was observed a singular isolated rock, which stands like a tower on the top of the ridge, rising above the surrounding forest with a bare and apparently unbroken surface. This peak, according to Lieutenant Emmons's observations, is on the parallel of 42° N.; from its top an extensive country is overlooked, and as soon as the party came in sight of it a dense column of smoke arose, which was thought to be a signal made by the Klamet Indians, to the Shaste tribe, of the approach of our party.*

On the way, they met an old squaw, with a large firebrand in her hand, with which she had just set the grass and bushes on fire; when surprised, she stood motionless, and appeared to be heedless of any thing that was passing around her. She was partly clothed in dressed deer-skins, one around her waist and another thrown over her shoulders, both fastened with a girdle, and having long fringes made of thongs of deer-skins braided; there were no other Indians in sight. The party encamped in a valley among the hills, in which were found many boulders of granite and syenite.

The hostility of the Indians, and their having been successful in stealing the horses of former parties, induced Lieutenant Emmons to have an unusually strict guard kept during the night.†

On the 29th, they set out to ascend the Boundary Mountains, which separate Mexico from the United States. It is a range of hills from twelve hundred to two thousand feet high, some of whose summits have a mural front; the features of all the ridges wear a basaltic appearance, though some of them are of sandstone, and contain fossils. As they ascended, they every moment expected to be attacked, particularly at a steep and narrow path, where a single horse has barely room to pass. The man Tibbats was one of a party of fifteen, which was defeated here by the Indians, some three years before. One of their number was killed, and two died of their wounds on the Umpqua, whither they were obliged to retreat, although they had forced the Indians back with great loss. He showed great anxiety to take his revenge on them, but no opportunity offered, for the party had no other difficulty than scrambling up a steep path, and through thick shrubbery, to reach the top. Not an

* This I have designated as Emmons's Peak, after the officer who had charge of this party, as a memorial of the value of his services in conducting it safely through this hostile country.

† The Klamet Indians took the pains to send word to Fort Umpqua, that they were prepared to kill any whites who should attempt to pass through their country.

Indian was to be seen, although they had evidently made some preparations to attack the party; the ground had been but recently occupied, some large trees felled across the path by burning, and many other impediments placed to prevent the party from advancing. The whole mountain side was admirably adapted for an ambuscade.

At the summit of this range, they got their first view of the Klamet Valley. It was beneath them, walled on both sides by high basaltic hills, one beyond another. Mount Shaste, a high, snowy peak, of a sugar-loaf form, which rose through the distant haze, bore southward, forty-five miles distant. They descended on the south side, and encamped on the banks of Otter creek, within a mile of the Klamet river.

This ridge divides the waters flowing to the north and south. The soil seemed to change for the worse, becoming more sandy.

In consequence of the illness of some of the party, it was concluded to remain stationary on the 30th: the others made excursions around the camp. The country they saw was a broad prairie valley, dotted with oaks and pines, with a serpentine line of trees marking the edges of the streams till they are lost in the distance. This valley lies in the midst of hills, clothed with a forest of evergreens, and through this the waters of the Klamet flow, passing beyond it, through a narrow valley on the west. The most remarkable object in this place is the isolated conical peak, which rises immediately from the level plain to the height of one thousand feet, and is destitute of trees, except on its summit.

Near their camp was the remains of an Indian hut, which had been constructed of bent sticks: this is represented at the end of the chapter.

Lieutenant Emmons, during the day, obtained both dip and intensity observations. The thermometer, in the shade, rose to 100°. At dawn the following morning, it was 32°. The hunters did not succeed in procuring any game.

On the 1st of October, they were enabled to take an early start. The weather was, however, sultry, and the atmosphere again so smoky as to shut out the Shaste Peak from view. In about two hours they crossed the Klamet river, where it was about eighty yards wide, with low banks, destitute of bushes. It was about four feet deep, with a pebbly bottom. Both above and below the ford, there were rapids; the volume of water was about equal to that of the Umpqua. From the appearance of its banks, it is subject to overflow. The prairie, after crossing the river, became dry and barren, from which a solitary bute, by which term these hills are known, occasionally rose up, from one to five hundred feet high. These are peculiar to this country. Heaps

of volcanic rocks, consisting of large masses of grayish or reddish porphyritic lava, in blocks of from one to ten cubic feet in size, were lying on the surface in disorderly piles. Beyond, to the eastward, the lava heaps became still more numerous.

They encamped on the southern branch of the Klamet river, which is a beautiful, clear, and rapid stream, where they met with a small spot of grass, the only one they had seen during the day. Two Indians were discovered on the look-out from one of the lava heaps. Lieutenant Emmons, taking the guide with him, succeeded in preventing their escape, and was enabled to approach them. They were at first under great fear, but soon became reconciled, and sold two salmon they had with them, which they had taken in the river with their fish-

: salmon were of a whitish colour, and not at all delicate their tails were worn off, and the fish otherwise bruised Many salmon are caught in all these rivers. The Indians t to be better-looking than those before seen about the were quite naked, excepting the maro. After having their fish, they were willing to sell their bows and ch they had hid in the grass. These which were all were bought for a knife. They then pointed out some r tribe, who were seated on the side of a distant hill, and were very desirous that they might be permitted to come into the camp; but permission was refused them. Here our gentlemen saw large bundles of rushes, made up in the form of a lashed-up hammock, which the Indians are said to use instead of canoes.

On the 2d, they travelled all day over a rolling prairie, without water; the low ground was incrusted with salts, notwithstanding which, the land was better than that passed over the day before. Some patches of spiræa and dogwood were met with, and a better growth of grass; although it was still very scanty.

Large herds of antelopes were seen, but none of them were killed; the hunters also recognised the mountain sheep, which are of a dark colour, much larger than the common sheep, and having large horns. Towards the afternoon they came to some holes containing water; and such had been the suffering of some of the animals from thirst, that they rushed into them with their packs, and it required much labour to extricate them, for which purpose it was necessary to use the lasso. About midday they left the Klamet Valley, which is far inferior to any portion of the country they had passed through; and as they crossed the hills which enclose it, they found that the outcropping rocks were composed of a dark green serpentine. They encamped a little beyond the hills, and in the vicinity of their camp,

boulders of a coarse syenite, forming the bed of the creek, and lying along its course, were seen. The hornblend crystals of the latter rock were often two inches long, and were set in a white granular paste of feldspar.

At their camp they were visited by a party of Shaste Indians, who were allowed to enter it, and for some time there was a brisk trade for their bows and arrows. These Indians are a fine-looking race, being much better proportioned than those more to the northward, and their features more regular. One of the boys was extremely good-looking. He had a bright black eye, and pleasing expression of countenance; he was clad in dressed deer-skins, over his shoulders and about his body, but his legs were bare. They all wore their black hair hanging down to their shoulders; and they do not compress their heads. Mr. Agate had much difficulty in getting them to stand still for the purpose of having their portraits taken, and gave them a miniature of his mother to look at, hoping that this would allay their fears, but it had a contrary effect, as they now believed that he desired to put some enchantment upon them, and thought that he was the medicine-man of the party.

They obtained an exhibition of the archery of the Indians by putting up a button at twenty yards distance, which one of them hit three times out of five: the successful marksman was rewarded with it and a small piece of tobacco. They use these bows with such dexterity as to kill fish, and lanch their arrows with such force, that one of the gentlemen remarks he would as leave be shot at with a musket at the distance of one hundred yards, as by one of these Indians with his bow and arrow. Their bows and arrows are beautifully made: the former are of yew and about three feet long; they are flat, and an inch and a half to two inches wide: these are backed very neatly with sinew, and painted. The arrows are upwards of thirty inches long; some of them were made of a close-grained wood, a species of spiræa, while others were of reed; they were feathered for a length of from five to eight inches, and the barbed heads were beautifully wrought from obsidian: the head is inserted in a grooved piece, from three to five inches long, and is attached to the shaft by a socket; this, when it penetrates, is left in the wound when the shaft is withdrawn; a very shallow blood-channel is sometimes cut in the shaft. In shooting the arrow, the bow is held horizontally, braced by the thumb of the left hand, and drawn by the thumb and three first fingers of the right hand. To obviate the disadvantage of drawing to the breast, the chest is thrown backwards; on discharging the arrow, they throw out the right leg and stand on the left. Their quivers are made of deer,

raccoon, or wild-cat skin; these skins are generally whole, being left open at the tail end.

A disease was observed among them which had the appearance of the leprosy, although the doctor did not recognise it as such, one of the six had wasted away to almost a skeleton from its effects.

The old man was pointed out as the father-in-law of Michel La Framboise, who, as I have said before, has a wife in nearly every tribe.

As to dress, they can scarcely be said to wear any except a mantle of deer or wolf skin. A few of them had deer-skins belted around their waists with a highly ornamented girdle.

On the 3d, they continued their route up the plain, and soon reached its termination, after which they entered the forest on the slopes of the Shaste Range; the path was rendered very broken and uneven by the knolls of trachyte which were seen in every direction. On arriving at the top of the ridge, they had a magnificent view of the snowy peak of Shaste, with a nearer and intermediate one destitute of snow, with tall pines growing nearly to its top. Where the surface could be seen, it appeared as though it was covered with large blocks of rock: its conical shape proved its volcanic character, although no crater could be perceived.

The Shaste Peak is a magnificent sight, rising as it does to a lofty height, its steep sides emerging from the mists which envelope its base, and seem to throw it off to an immense distance; its cleft summit gave proof of its former active state as a volcano. The snow lies in patches on the sides and part of the peak of this mountain; but there is a great difference in the position of its snow-line from that of Mount Hood or St. Helen's. Its height is said to be fourteen thousand three hundred and ninety feet, but Lieutenant Emmons thinks it is not so high. After passing this ridge, they soon met the head waters of the Sacramento, flowing to the southward, and their camp was pitched on the banks of another stream, that came from the Shaste Peak.

Our party now had their prospects somewhat brightened, having passed safely through the country of the "Bad Indians." I cannot but regret that they should at this time have been found in so hostile a state that it rendered it not only prudent, but necessary for the safety of the party, that all intercourse should be avoided, and consequently one of the objects of the Expedition, that of acquiring some knowledge of their actual condition, numbers, &c., was frustrated.

On the 4th, they had fairly entered into the district of pines: again some of the Lambertiana were measured, and found to be eighteen feet in circumference, with cones sixteen inches long.

They encamped on Destruction river, which runs from this moun-

tain range toward the south, in a place where they found food for their horses and water in abundance. The air was delightful; the forest protected them from the rays of the sun, and besides this the game was plentiful. Near the encampment, in a northwest direction, was a mountain ridge shooting up in sharp conical points and needle-shaped peaks, having a precipitous front. One of these peaks almost overhangs the valley, presenting a gray surface of naked rock two thousand feet high. The valley which adjoins is strewn over with boulders of white granite, similar to that already described. From this, there is little doubt that the ridge is formed of the same material. At meridian they reached a small valley bordering on the Destruction river, where they found a chalybeate spring. The water oozes out from the rocks, bubbling up freely, and is highly charged with carbonic acid gas. In taste it was found agreeable to both the riders and the animals. Its temperature was 50°, that of the air being 75°; about a gallon per minute is discharged. Around it there is a thick deposit of iron rust, and a few yards distant a small pond, the bottom of which was also coated with a ferruginous deposit. The rocks in the vicinity of the spring were of the trachytic and slightly cellular lava, which is speckled with grains of feldspar. The hunters said that the spring was in all respects similar to that on the Bear creek, which empties into the Youta Lake, known in the Rocky Mountains as the Soda Spring. Mr. Dana found some difficulty in accounting for this emission of carbonic acid, as no limestone was found or known to exist in the neighbourhood; yet he is inclined to believe, that it may be owing to the decomposition of sulphuret of iron. For further information upon this subject, I would refer to his Geological Report.

On this night they had a severe storm from the westward, and occasionally heard the crash produced by the falling of large pines.

The character of the country had now changed, and afforded a new and more extended botanical field, as well as new geological features. The general tendency of the ridges is north and south, but the whole may be classed as a series of valleys and hills thrown in all positions. The hills are, for the greater part, covered with soil, when it can find any place of deposit; and all are richly clothed with vegetation. The principal timber consists of pines and oaks; and there are many smaller plants, of which the flowers must be abundant in the proper season. As it was, our botanists reaped something of a harvest; for information respecting which, the Botanical Report is referred to.

They continued to follow Destruction river until the 9th, when it was joined by a stream from the northward and eastward, which was taken to be the northeast branch of Pitt river: it was larger than the

stream they had been following for the last few days, and is supposed by some to take its rise in Pitt Lake; but this I very much doubt, as it lies on the other side of the Cascade or Californian Range, and the two united form the Sacramento.

Though I have dignified these two streams with the name of rivers, it must not be supposed that they are really such, in our acceptation of the word. The party are generally of the opinion that they should be called creeks.

They encamped late in the evening near a small rivulet, to the westward of the Sacramento. They had much difficulty with their horses, which had now become tired out. For this reason it became necessary to abandon one of them, as he was unable to proceed any further.

On the 10th they made an early start, and left the mountains. The width of the range they had passed through was upwards of one hundred miles. At one place Guardipii, their guide, lost his way; but on applying to Warfields' Indian wife, she pointed out the trail without difficulty.

They had now passed into the Sacramento Valley, and had met with some of the Kinkla tribe of Indians, who were known to be friendly, and they became relieved from anxiety. The botanical character of the landscape changed as suddenly: instead of firs, pines, &c., they found themselves among sycamores, oaks, and cotton-wood trees. The oaks bear a variety of acorns, which are equally the food of the bears and the Indians. The prairie bordering the Sacramento at this place is about fifty feet below the upper prairie, and continues for many miles very regularly on the same level; the latter falling into it by a sloping bank.

SACRAMENTO INDIAN.

In the evening the camp was visited by many of these friendly and

docile Indians, who made themselves quite easy, laughing and joking, and appeared rather to look upon the party as beneath them. They had some resemblance to the Shaste Indians; most of them were naked; the others had a piece of deer-skin thrown over their shoulders; their faces were marked with an expression of good humour. Some of them wore their hair long, extending below the neck and divided from the top; in others, and most commonly, it was drawn back and gathered in a bunch behind, where it was fastened with a string of deer-sinew; their ears were bored, and a short string inserted with a few beads; the face was usually painted, the upper part of the cheek in the form of a triangle, with a blue-black substance, mixed with some shiny particles that resembled pulverized mica.

The Indians were darker as to colour than the northern tribes, and their general appearance resembled that of the South Sea islanders. Their food consists principally of fish and acorns; of the latter they make a kind of black cake by shelling the acorns, drying them in the sun, and then pounding them between stones to a meal, which they mix with a little water and arbutus-berries, which gives it a flavour; it is then formed into cakes about two inches thick, when it is wrapped in leaves and baked; it is quite black and eats like cheese: these acorns are quite palatable in the raw state. The seeds of the different genus of pine are also eaten, particularly one that is peculiar to California. The arbutus-berry is in great plenty, and is also ground into meal; they have also many grapes. The game had also become very abundant, in consequence of the quantities of food, which attracts them as well as the Indians, and many antelopes and deer were observed. Large flocks of California partridges and geese were seen: among the birds was a new species of magpie.

None of the Indians but men visited the camp, the women being left at their rancheria. Our party went to visit it; it was about half a mile below the camp, and consisted of some rude huts, built of poles, and divided by coarse mats into a number of small apartments. The whole was surrounded by a brush fence, which served for a stockade.

The huts were small in size and devoid of comfort or cleanliness. It was remarked that the women were much inferior to the men in personal appearance, looking careworn and wrinkled, probably from hard work; for on them seems to depend the preparation of all their winter's supply of food, at which they seemed to be constantly engaged; while the men are to be seen lounging about, or engaged in games of hazard. They are, however, during the season, engaged in taking salmon, either in weirs, or by spearing: the former method has been described already; for the latter they use a long forked spear or fish-gig, which

has a sharp deer's horn to confine the two prongs, and is attached to the spear by a small lanyard, which in entering the fish slips off, and retains its hold.

At the rancheria, several dances were performed; and it was observed that many of the women were tattooed on their arms and body.

On reaching the Sacramento, it had been recommended to Lieutenant Emmons to procure canoes, if possible, either by purchase or constructing them, in consequence of the belief that both his party and the animals would have been nearly if not quite worn out. No canoes, however, were to be found, and, as has been seen in my account of that river, none were used by the Indians. Neither could any timber be obtained without much detention, of which to construct one. It was, therefore, necessary for him to keep on to Captain Suter's, where he expected to find boats to take them to the ship as soon as possible. From what Lieutenant Emmons could learn, there was no difficulty in proceeding in canoes from this place, though there would have been some obstacles to surmount, particularly the fish-weirs, which exist below.

On the 11th, they took leave of the friendly Indians, who had, during the night, been as watchful as themselves, passing the word among their look-outs as if they had been regular sentinels. The party proceeded down the western bank of the Sacramento, over a rolling prairie country, which they characterize as the most worthless they had met with. The soil consists of gravel, coarse pebbles, and large stones, mixed with sand. They frequently met the beds of streams, three hundred yards wide, which intersect this part of the country, the pebbles in which are chiefly composed of jasper and milky quartz, with a few of basalt, pudding-stone, and pieces of slate. They made this day, twenty-five miles—the longest day's ride on the journey.

On the 12th, Lieutenant Emmons determined to ford the river, as it was doubtful whether he would have so good an opportunity lower down. Inass, one of the hunters, was found sitting beside his horse, on the opposite side of the ford, loaded with the meat and skin of a large grisly bear which he had killed. The river was about three feet deep, and two hundred yards wide. They stopped at a place known among the hunters as Bear-camp, from the number of grisly bears found here. Five of them were shot the same afternoon, with three deer, which were seen feeding within sight of the camp, all in excellent condition. The country on the east side of the river was more level than on the west, and the soil was thought to be better. Few plants, however, were seen, in consequence of the country having been burned over.

The country continued much the same until, on the 15th, they came

in sight of the Prairie Butes, a regular collection of hills, rising out of the level plain like islands from the water. These are very deceptive in height, and may be seen from a great distance. The party encamped on a small creek, called by the trappers the Little Fork of the Butes. The hunters said that the party employed by the Hudson Bay Company last year caught more than one hundred beavers during their sojourn in this neighbourhood with their cattle.

On the 16th, they passed towards the Butes, and encamped, after an ineffectual search for water, at a place that had been occupied for the same purpose by Michel, in the valley or "Kraal" of the Butes. Here they found two deep holes of stagnant water, the remains of a rivulet that was now dried up. The ground around and near the Butes is covered with a great quantity of the bones of animals that resort hither for safety during the season of the freshets which flood the whole of this extensive plain. The soil is quite loose and crusted over with the deposit left by the water, through which the horses broke to the depth of four or five inches; nearer the Butes, the soil is harder and strewed with fragments of volcanic rocks. There is little doubt that each of the Butes was once a volcano. They are grouped within an oval space, which has a circumference of about thirty miles: the longest diameter of the oval figure lies in a northeast and southwest direction. The valley passes through the southern part, and opens out on the eastern: it is about seven miles in length; and here the party found water. This valley may be considered almost as a prolongation of the exterior plain, though parts of it are somewhat higher, as appeared by its not having been overflowed. The highest of the Butes was made, by a triangulation executed by Lieutenant Emmons and Mr. Eld, seventeen hundred and ninety-four feet. They have the appearance of having once been much higher and more extended than they now are. The volcanic rock, according to Mr. Dana, is a trachytic porphyry, of a purplish colour, which contains hornblend and six-sided tables of mica, with glassy feldspar, in crystals from a quarter to half an inch in size, disseminated through it; some of the rocks have a porcelain aspect, but this variety only constitutes a few of the peaks. The rock is found either in horizontal or vertical layers or curved in all directions, and is thickly sprinkled with mica. The Butes were ascertained to be in the latitude of 39° 08′ N.; yet it has been generally believed that these were on the dividing line between Oregon and California.

On the 17th, they proceeded, and in about fifteen miles they found themselves on the banks of the Feather river. There is a difficulty in fording this stream, on account of the quicksands; and the first time

they attempted it, the guide and his horse were nearly lost. To swim the river was equally impracticable, in the weak and worn-out state of their animals. They therefore proceeded down its bank, looking for a ford. On their way, Inass killed a wild cow, one of a herd of ten. It is said that the wild cattle, which have originated from the animals that have escaped from the herds passing through the country to Oregon, are increasing very fast.

They encamped in a beautiful oak grove, near the junction of the Feather river with the Sacramento. The two rivers are of about the same size, being each seventy yards wide. The waters of the Feather are clear, and in many places deep; the banks are, as usual, lined with sycamore, cotton-wood, and oak, and were at this time about twenty-five feet above the stream. It appears to be navigable for boats. The party succeeded in fording it on the 18th, within two miles of the junction. Near the ford, the Indians had an extensive burial-ground, marked by a vast number of skulls and bones, that lie scattered around in all directions, and are said to be all that remains of a once powerful tribe, that has been swept off by disease.

They then proceeded on to Captain Suter's, where they arrived the next day.

The officers appear to have entered this valley with a high idea of its fruitfulness, and with the expectation of finding the soil abounding with every thing that could make it desirable for the abode of the agriculturist, and susceptible of producing all that can add to the comfort or convenience of man. It is not surprising that they should have been sadly disappointed, when they beheld a large part of it barren, and destitute even of pasturage, while that which is fertile is liable to be annually overflowed. The high prairie is equally gravelly and unfertile. Yet it is necessary to say there is a sufficient quantity of good soil to make it a valuable agricultural country, and that it would be capable of affording subsistence to a large number of inhabitants, more, however, from the extraordinary fertility of these grounds than from their extent.

After leaving Captain Suter's, or New Helvetia, the party divided. The detachment under Lieutenant Emmons, with Messrs. Dana, Agate, Colvocoressis, and Dr. Whittle, embarked in the Vincennes' launch, which met them a short distance below that place, and reached San Francisco at eight o'clock P. M. on the 24th.

The other detachment, consisting of Messrs. Eld, Peale, Rich, Brackenridge, and the sergeant, with some of the men, went by land. I cannot avoid again returning my thanks to Captain Suter, for his kindness to this party. All the officers spoke most particularly of the

attention he paid to them, individually and collectively, and of his care and watchfulness in making provision for our sick.

On the 21st, the land party commenced their journey, with a young and intelligent Spaniard for a guide. The same day they made fifteen miles, passing over a dry portion of country, and encamped near two ponds, called in the country, Poros, the only place, as was supposed, where water could be obtained within twenty miles; they, however, found some the next day in the Rio Cosmenes, within a mile and a half of the camp. Game was, as usual, very abundant; but the whole country was suffering from the drought that has been before spoken of.

On the 22d, about noon, they crossed the river Mogueles, which was then a small stream; but at other seasons, it is said it cannot be crossed on horseback. They travelled this day as far as the San Juan; the only water that it contained was in small pools. This place had been termed the Frenchman's Camp. The ducks and geese had rendered the water scarcely drinkable.

On the 23d, before noon, they reached the San Joachim, which they found about fifty yards wide, and about three feet deep. Under the expectation of finding water, they were induced to ride forty-four miles, but were again disappointed. On the 24th, they entered among the Pul Porrice hills, a bare and barren range, composed of sandstone and volcanic rocks. As they approached the mission of San Jose, the country became more hilly, the oak abundant, and herds of cattle and horses were seen. On their way they fell in with large encampments of Indians, who were busily employed in collecting acorns. They were all half civilized as to dress, the men being clothed in shirts and trousers, some in velvet breeches; the women in calico gowns, and gay-coloured shawls; several hundred of these were met, each loaded with the beef which is distributed to them in weekly rations. They are annually allowed a short holiday to return to their native wilds, during the time acorns are in season.

The approach to the mission shows it to have once been a large establishment. It has all the appearance of a town, being built in the form of a street of considerable length. In the centre is the church and convent, with large dwelling-houses on each side of it, and on the opposite side the houses for the neophytes, consisting of small low buildings, with every appearance of filth and decay about them. Indeed the whole establishment is falling into ruins; the walls and gates are thrown down, and every thing wears a look of neglect, both in the buildings and the persons who inhabit them. The halcyon days of this mission have passed away; it is no longer the abode of

hospitality and good living, since it has fallen into the hands of the administradors or agents of the government. The remains of a fine garden are also perceptible, where there is yet good fruit; and near by are extensive fields of Indian corn, which were formerly cultivated by irrigation.

The reception of our gentlemen was in keeping with the place, neither polite nor friendly. No civilities were tendered, no offers of accommodation made, although they brought a particular letter from Captain Suter. Our party were inclined to believe that this was owing, in part at least, to the condition of their wardrobe; their whole appearance, it must be admitted, was not much in their favour, dressed as they were in the deer-skins that had been worn on their journey, yet they thought that their characters might have been discovered through their buckskins.

The administrador told them there was no accommodation for their horses, and showed them none, except a miserable hole without any furniture. The letter of introduction bore the superscription of Don Jose Antonio Estrade. They met with the tailor to the establishment, Ephraim Travel, an American, of Philadelphia, who showed them the lions of the place with great politeness, and as far as in him lay, made amends for their otherwise cold reception. He took them round the gardens, through the churches, and told them that the Indians under the care of the mission were at the present time about six hundred, which was only one-third of the number they had two years before. In consequence, there was but little cultivation carried on, compared to what there had been formerly.

The harvest at the mission had been very small, from the great drought. No rain had fallen for upwards of a year. The vintage, however, had been very fine, and forty barrels of wine had been made, besides a large supply of grapes for the whole establishment. The two vineyards comprise about four acres, and beside vines, are filled with apple, pear, and other fruit trees. The buildings of the mission are all constructed of adobes, and covered with tile roofs.

Fortunately for the party, Mr. Forbes, the agent of the Hudson Bay Company, residing a few miles farther on, happened to be at the mission, and very kindly offered them accommodations, which they thankfully accepted. They found him lodged in a comfortable two-story adobe house, situated on the border of an extensive prairie, but without any trees or cultivation around it. He entertained them very hospitably.

The party visited Santa Clara the next day, where their reception was very courteous, and furnished a strong contrast to that at San

Jose. After two days' journey, they reached Yerba Buena at noon on the 28th, having paid a visit to the mission of Nostra Señora de los Dolores, within three miles of that place.

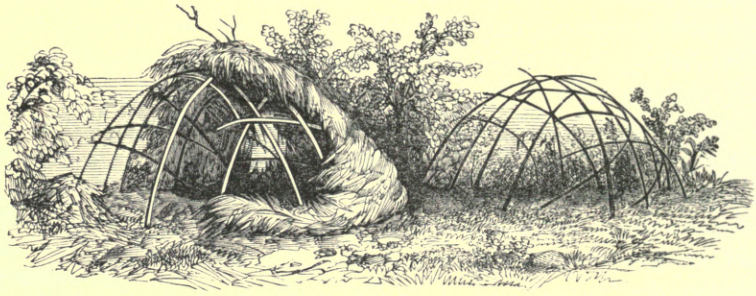
They reached the ship the same afternoon, and though fatigued and somewhat worn down, they had been much pleased with their jaunt.

Although this journey from the Columbia to the Sacramento was attended with much fatigue, yet the labour and suffering were more than compensated by the information it furnished in relation to the southern section of Oregon, and the addition of new objects to the collections of the Expedition. Although every thing was not attained that I intended, yet I feel satisfied that all was done which the very limited time, and the hostile state of the country, would permit. To the perseverance and prudence of Lieutenant Emmons, much credit is due, as well as to the other officers and naturalists, for the manner in which they co-operated with him. The duties assigned them were performed under the most trying circumstances, while worn down by distressing attacks of the ague and fever. This disease, in particular, affected those members of the party who had been encamped on the Willamette, where it was supposed they contracted it.

The closing scene of the tour deserves a short notice, as it is probably peculiar to a country like California. On the arrival of the party, it seemed to have been surmised by the inhabitants of Yerba Buena, and by the few who dwell at the mission, presidio, and neighbouring rancheria, together with the trappers and hunters, that our horses and accoutrements must necessarily be parted with. I make no doubt that good bargains were anticipated, or rather a determination made that they would have all for little or nothing. The alcalde, the only person in authority, a man of much rotundity and little height interested himself exceedingly in the matter. In the first place, it was discovered that many of the horses were not marked, and therefore, agreeably to the laws of the country, they belonged to the government; secondly, that many of them were beyond recovery from their worn-out condition; thirdly and lastly, that if they did recover, they would be worthless. The same faults were applied to the pack-saddles, parfleshes, and appichemens, that have been described in the beginning of this chapter, and which had caused so much trouble to procure. Their value, in the eyes of these gentlemen, was next to nothing. Under these circumstances, a notice was posted up at the few corners of the pueblo of Yerba Buena, that they would be disposed of by public auction.

This attracted a great crowd, and among the number was the only representative of authority of the government, the redoubtable alcalde. The horses had been put in lots, as was likewise the case with the

accoutrements. Each of these was announced first in English, then in Spanish, and last in French, which gave the auctioneer a full opportunity to descant upon their sore backs, lameness, visible ribs, and sorry appearance. The Spanish language seemed to be more copious in words to express their condition, for it certainly produced many jeers and much laughter among the motley throng. They went off briskly, however, in lots, from one dollar and fifty cents to five and six dollars each, principally under the bid of the redoubtable alcalde, who had arranged things well enough with those under his authority; but as there were some of our countrymen and foreigners there whom he could not overawe, he had to pay what was deemed a fair price for the worn-out animals, although they were sold without reserve; and when one considers that a brood-mare is valued here at less than a dollar, it will appear so. The proceeds of the sale amounted to two hundred and ten dollars.



SHASTE HUT.

CHAPTER VII.

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CHAPTER VII.

SAN FRANCISCO TO MANILLA.

1841.

By the 28th of October, all the exploring parties had returned, and the duties of the observatory and surveys were completed. The instruments were at once embarked, and preparations made to sail with the first fair wind.

By a series of observations of moon culminating stars, the longitude of Sausalito Fort was found to be 122° 25′ 36″ W.; the latitude, by numerous altitudes, 37° 50′ 50″ N. Full series of magnetic observations were also made, with the usual meteorological record. The mean temperature for the eighty days during which the Vincennes lay at Sausalito was 61·6°.

The addition of the brig Oregon to the squadron rendered many changes necessary in the distribution of the officers. The command of that vessel was given to Lieutenant Carr, first lieutenant of the Vincennes, and such officers were ordered to act under him as would insure efficiency and harmony in the duties that remained to be completed.

It was with no little regret that I parted with Lieutenant Carr, who had been the executive officer of my ship for upwards of two years, during which time his duties had been at all times responsible, arduous, and valuable to the Expedition. By his excellent management the vessel had been kept in the best possible order, and while the comforts of the men were carefully attended to, the rules and regulations of the vessel were strictly enforced. In addition to the sufficiently arduous duties of executive officer, he was, during my frequent and necessary absences, charged not only with the duties on board, but with those of the observatory, and was, besides, my assistant in the care of the

chronometers. My regret at parting with him gave way, however, to the pleasure of assigning him a station to which his conduct had so justly entitled him, and which he was so well qualified to fill.

To complete our supplies for the return voyage, it was expedient that we should again visit the Hawaiian Group: this was rendered absolutely necessary, in order to procure clothing for those who had lost every thing by the wreck of the Peacock; for deficiency in that important article might, had we pursued the direct route to the China Seas, have subjected the men, who had already undergone so much exposure, to the attacks of disease.

This necessity, added to the other delays the unfortunate loss of the Peacock had caused, was a source of profound regret, as it prevented me from availing myself of the permission granted in my instructions, to enter the Sea of Japan, through the Straits of Sangar. I gave up this plan, to which I had looked forward as one of the most interesting parts of our cruise, with great reluctance; but the season was rapidly passing, and to undertake this remote expedition would render it impossible to accomplish the other objects marked out for me previous to my return to the United States. We might not, perhaps, have succeeded in entering into communication with the inhabitants of that interesting and little-known country; but we might certainly, by landing on some of the islands adjacent to its coast, have obtained much interesting information, and added greatly to the collections of our scientific departments.

On the 1st of November, we had a wind that enabled us to make sail, although it was late in the day before it was sufficiently strong, and by that time the ebb tide was far spent. To avoid any farther loss of time, I determined to make the attempt. Signal was accordingly made; and the vessels were in a few minutes under way, and standing out of the harbour. It may, indeed, be said, that it is practicable to enter and depart from this port whenever the tide is favourable. We continued beating out to gain an offing until towards sunset, when it fell calm, and the tide failed us. The Vincennes was, therefore, compelled to anchor in six and three-fourths fathoms water, three miles from the land; and signal was made to the two brigs, which were about three miles outside of our position, to do the same.

On our coming to anchor, there was scarcely any swell, and the ship lay almost as still as if she had been within the harbour. The sun set clear, and every thing betokened a calm and quiet night.

At about 10 P. M. the swell began to increase, without any apparent cause, and so rapidly as to awaken my anxiety; but being in such deep water, I thought that the vessel was sufficiently distant from the

bar not to be exposed to any breakers. As the flood continued to make, the swell increased, and by midnight we were enveloped in fog, without a breath of air, and the ship rode over the rollers, that were now becoming very heavy, and caused her to pitch violently. There was, however, no break to them; but as ample scope of cable had been given, the ship occasionally swung broadside to, when the heavy pitching was changed to rolling, so deep as to endanger our masts. At 2 A. M. a breaker was heard outside of us, passing in with the roar of a surf, after which they became constant, and really awful. The ship might now be said to be riding in breakers of gigantic size; they rushed onwards with such a tremendous roar and violence, that as each wave was heard approaching, it became a source of apprehension until it had safely passed. Such was its force that when it struck the ship, the chain cable would surge, the ring-stoppers part, and some few fathoms of the cable escape. As the time of high water approached, the roar of these immense breakers was constant. The ship was as if tempest-tost, and our situation became at each moment one of greater solicitude. The actual danger of wreck was not indeed great, for in the event of parting our cable, the tide would have carried us towards the harbour, and into deeper water, where the rollers would have ceased to break; and there was no great danger that we would drift on the bar, which was a mile or two to the northward of our position.

I looked forward with anxiety for the time of high water, as the period when we should be relieved from our unpleasant situation, not only by the change in the course of the tide, but also by the cessation of the breakers.

Our situation afforded me an opportunity of measuring the velocity of the waves as they passed the ship; and though the distance was short, yet the observations were numerous, and gave the velocity at from fifteen to eighteen miles an hour; their estimated height was over thirty feet, their width, from eight hundred to one thousand feet.

At half-past three, one of these immense breakers struck the ship broad on the bow, and broke with its full force on board: the cable surged; the stoppers were carried away; and the whole spar-deck swept fore and aft; the boats and booms broke adrift, the former were stove, and the latter thrown with violence to one side.

Unfortunately, Joseph Allshouse, a marine, who was in the act of ascending the ladder at the time, was struck by one of the spars, and so much injured that he died a few hours afterwards.

It was not until between seven and eight o'clock that the ship could be relieved from this situation: at that time a light air from the land sprung up, of which advantage was at once taken to weigh our anchor.

The rollers, however, had by this time ceased to break, the sea began to fall, and a few hours afterwards regained its former placid and quiet state. The fog was still dense when we reached deep water where we again dropped anchor; but shortly after the weather cleared up, and we had communication with the Porpoise and Oregon; they having reached deeper water, had fortunately not experienced any of the rollers.

It now became our melancholy duty to bury poor Allshouse. He had been one of those who had been long attached to the Expedition, and always conducted himself with propriety.

We afterwards got under way, and stood for the bay of Monterey, into which I sent the Porpoise with despatches for the United States, ordering her to land them, and then make the best of her way to the Sandwich Islands, in case she did not meet the Vincennes.

The next day being foggy, I bore away in company with the Oregon.

On the 5th, the weather continuing thick and foggy, with strong breezes from the northward and westward, I made all sail and parted company.

On the 6th, the full allowance of bread was again served to the crew.

The wind on the 7th, when we had reached the latitude of 27° N., began to incline to the northeast, and the temperature became mild.

In the latitude of 26° N., we entered the trades, being then in the longitude of 134° W. The weather peculiar to the region of the trades was now experienced, with light squalls of rain and a heavy sea following us, which caused the ship to be very uneasy.

On the nights of the 10th, 11th, 12th, and 13th, the usual look-outs for the periodic showers of meteors were stationed; but the weather was not favourable, and the number counted was not above that usually seen on fine nights. On the latter day, I shaped our course to run over one of the positions of Copper's Island, supposed to exist in longitude 151° 36′ W., and latitude 25° 48′ N. On the afternoon of the 14th, we were within five miles of its assigned place, and the weather was perfectly fine, with a clear horizon, but there was no appearance of land.

On the morning of the 16th, we made the island of Maui, and at noon we were off its western end. I then determined to run through the Pailolo Channel, between Maui and Molokai. On approaching the island of Maui on its north side, there is some liability to mistake the isthmus for the opening of the channel, as that part of the island called West Maui is frequently enveloped in clouds.

The trade-wind, as we passed through, blew very strong. The scenery is very bold, the two islands of Maui and Lanai lying on the left, with that of Molokai on the right: they are all high and volcanic, and during a strong trade-wind are capped with clouds and constantly undergoing changes from the shadows thrown upon them; these, with the town and shipping lying off Lahaina, form a pleasing picture. The day being far spent, I hove the ship to for the night under the west end of Molokai. The current experienced during our passage was found to prevail to the southward, until we reached the trades, when it inclined somewhat to the southward and westward.

The 17th, at daylight, we made the island of Oahu, and at 10 A. M. anchored off the town of Honolulu. The Porpoise came in at 2 P. M., and the Flying-Fish at five o'clock of the same day. The following day the trade-wind was too strong to admit of the Vincennes entering the inner harbour; but the Porpoise and tender were enabled to do so. The Oregon joined us in the afternoon, and on the next day at an early hour the squadron was again moored in the harbour of Honolulu.

Our reception was even kinder than before; and every facility that we could desire was offered for advancing our duties and procuring the necessary stores and clothing that our shipwrecked officers and men required.

It was my first intention here to part with the Flying-Fish, for the reports of her commander led me to believe that she was becoming unseaworthy. She was, therefore, thoroughly examined; but the report made upon her was sufficiently satisfactory to determine me to retain her until we had passed through our explorations in the Sooloo Seas. She was refitted and put in as good condition as possible for service. Captain Hudson superintended these duties, while I had my time fully occupied in making the magnetic experiments for the third time, and attending to the rates of the chronometers.

Honolulu showed signs of improvement, but I regretted to perceive that during the year the morals of the place seemed to have declined. The number of grog-shops had apparently increased, and the sailors' dancing-halls, with their music, were allowed more license than at our first visit. Yet, as far as the prompt execution of the law went, I did not find the authorities deficient. Indeed, at times, Governor Kekuanaoa is rather too precipitate in his decisions, of which we soon had an instance.

During our stay of ten days, the crews were allowed in turn, recreation on shore. Among the number was Lewis Herron, the cooper. In the course of his liberty, he was desirous of entering one of the sailors' boarding-houses, at the door of which his progress was arrested by a coloured man, who was on guard with an old cutlass, and who threatened Herron with violence if he attempted to enter. This, Herron, though usually a very quiet and orderly man, at once resented; and the altercation finally came to an angry dispute as to who was the better man. Herron, determined to prove that he was, laid hold of the sentry, overthrew him, took the rusty cutlass away, and struck him with it so as to give the man a slight scratch on the leg. Herron now brandished his weapon in victory; but being told by the bystanders that it was unlawful to carry weapons, he determined to take it himself to the governor at the fort, and deliver it up. On his way thither, and just before he arrived, he was met by some soldiers, who at once seized and carried him before the governor, with the sword in his hand, which he had refused to give up to any one else.

The governor had a kind of trial held by himself, and not according to law, (which provides for trial by jury,) to which he summoned the very man who had caused the quarrel, as a witness, without any formality or oath, and sentenced Herron to fifty dollars fine, and to receive one hundred lashes; while the person who had been guilty of using the arms, received but a nominal fine. One of the officers hearing of the circumstance in the afternoon, went to see Herron,

heard his story, and then saw the governor, who promised that the man should have another hearing or trial the next morning, at nine o'clock, and that he should not be punished until I was informed of it. In the morning, however, to my great surprise, I heard that, by the governor's orders, and in his presence, Herron had, at eight o'clock, an hour before the time his new trial was to take place, received twenty-eight lashes. On learning this circumstance, an officer was at once sent to wait upon the governor, to request an explanation of the proceedings, and that Herron might be given up, and held subject to the governor's order, for a proper trial. On receiving the officer, Governor Kekuanaoa declared that it was a misunderstanding relative to his having promised a new trial, and declined giving up the man. In consequence of this, I at once sent a message to demand him, and to state that if he was not surrendered, I should be obliged to take him, for I would not suffer him to remain any longer in the keeping of persons who would inflict punishment with so much precipitation. This caused his delivery. Shortly after, I received a letter, telling me that the corporeal part of his punishment was remitted, but demanding the fine. I took this occasion to write the governor a letter, pointing out wherein he had erred, in order that he might not fall into a similar error; which I have inserted in Appendix VIII.

The next day I was notified that he would be again tried before a legal tribunal, viz.: the governor and the United States consul. The day after, he was accordingly sent on shore to undergo a trial, which he himself wished, for the purpose of proving whether he was guilty and subject to the fine. The trial of Herron took place in the grass-house of the king, that has been before described; the scene was characteristic, and will show the manner of conducting trials in the Hawaiian Islands. Governor Kekuanaoa, the American consul, Captain Hudson, Dr. Judd of the American Mission, who acted as interpreter, and several officers belonging to the squadron, as well as those of the government police, numerous residents, of all colours and classes, the prisoner, his friends and accusers, were present. At one table the governor and Dr. Judd were seated, at another the consul and Captain Hudson, while the prisoner and witnesses, with the spectators, were standing in groups around. The court was opened in due form, and Dr. Judd stated the indictment, to which Herron pleaded not guilty; every thing was conducted with due solemnity; the oath was then administered by the American consul, to the witnesses on both sides. Dr. Judd examined and interpreted the whole. During this proceeding all were deeply intent in ferreting out the truth, with the exception of his excellency the governor, who was occupied most of the time in

searching his little white pet dog, that was lying on the table before him, for fleas. The whole trial was, however, fairly conducted, and resulted in proving that Herron was guilty. Herron was fined fifty dollars, which was paid, and the business ended.

I was satisfied, however, that the governor, whose conduct as an officer I have heretofore had occasion to speak of in high terms, had in this case acted with unbecoming haste and inconsiderateness, at the same time was wanting in delicacy to his best friends, for we, of all nations, are the most inclined to respect his laws and uphold his authority. I called upon him before my departure, to take leave, when he admitted that the course he had pursued was an unusual one, when foreigners were concerned; but from the explanations he made, I was satisfied his intention was to do right, but like many others when vested with authority, he was not inclined to delay action on a case he considered so clear as this. It proved a good lesson for him, and I do not believe he will err in the same way again.

During this last visit, a whale-ship arrived, having in her cruise visited the coast of Japan, and, on one of the small islands, picked up five Japanese, who had been wrecked, and were found destitute of the means of sustaining life; they had been there for several months before he took them on board. The man and boy were of small stature and diminutive appearance. They were possessed of little intelligence, and were of the lower order, probably fishermen. Mr. Agate made a drawing of one of them.

JAPANESE.

Of the trade and resources of the Hawaiian Group I have not as

yet spoken. The former is, at present, confined within very narrow limits. The islands produce but little, and their consumption of foreign products is necessarily small. The capabilities of the islands have generally been underrated, for their soil and climate are suitable for raising all tropical productions in considerable quantities, and at a moderate cost. But very little investment of capital has yet taken place, and the business that has induced the establishment of several commercial houses has been more that of transit than for the purpose of supplying the consumption of the islands, or obtaining their exports. A table of statistics, (see Appendix IX.,) which was published in a newspaper at Oahu, compiled by intelligent merchants there, gives the amount of imports at four hundred and fifty-five thousand dollars. These are the amounts of goods actually landed—I do not include those that have been brought in, and retained on board ships; while the exports of native produce are no more than ninety-eight thousand dollars: one-half of the imports are set down as from the United States. From this great difference between the imports and exports, it would appear that many of these articles must have been reshipped to other ports, or are still on hand. The latter I believe to be the case. During the year for which the returns are given, more has certainly been consumed on the islands than in former years; but the interdiction of trade by foreign vessels on the coast of California, together with the exorbitant duties there, have most effectually paralysed all trade in that quarter, and, therefore, the goods intended for that market were landed at Oahu, and remained in store there. The trade on the Northwest Coast, formerly so much resorted to by our vessels, is entirely broken up by the Russians, who have interdicted the taking of furs on the coast of their territory, and obtain their supplies exclusively from the Hudson Bay Company, or by the latter, who have adopted the principle of underselling all competitors, and have thereby caused a monopoly, which effectually shuts out all small traders. Some articles of Chinese manufacture are sent from the Sandwich Islands to Mexico, but to no great amount. There are, comparatively, few transient vessels that call at these islands on their way to China, and the whole trade seems now confined to but a few vessels.

Although the Sandwich Islands are not so fruitful as many of the other islands of Polynesia, yet their geographical situation has rendered them hitherto by far the most important group in the Pacific Ocean.

They are the favourite and most convenient resort for those whale-

ships whose cruising-ground is the North Pacific; and the amount of property engaged in this business, visiting the ports of the Sandwich Islands annually, is equal to three millions of dollars. To the supply of this fleet, the labour of the inhabitants has principally been directed.

The groves of sandalwood, which were formerly represented by a number of designing persons, who professed a strong friendship for the chiefs, to be an inexhaustible mine of wealth, soon gave out. The chiefs have ceased to look to them as a source of profit, and have begun the cultivation of sugar, which, together with silk, now attract much attention; but, until some capital be invested in these cultures, and the business be better understood, these articles cannot be raised to any large amount; yet the provisions and supplies to ships, suffice to afford all the necessary comforts to the inhabitants of this group.

Fortunately for the Sandwich Islands, they have no port that is defensible against a strong naval force, and therefore their consequence will be comparatively small in a political point of view. No foreign power, in fact, could well hold them, without great expense and difficulty. Honolulu is the port where vessels can best receive repairs, but it can only be used by the smaller class. By these circumstances, the neutral position of this group I think is insured; and this is most desirable for its peace and happiness. This fact seems to me to be tacitly acknowledged by the maritime powers, as no attempt has as yet been made to take possession of them, and they will, in all probability, be long left in the enjoyment of their neutrality, which King Kamehameha III. is now endeavouring to establish through a formal recognition of his kingdom by the United States, England, and France, by negotiations that are now pending. Such recognition will render them less liable, if not altogether exempt from aggressions, exerted in the manner that has already been related, in the course of this Narrative. These islands seem intended for peaceful occupations alone; their products, situation, and inhabitants, require and wish it. The power on which they must become dependent hereafter, is that which is to be established in Oregon and California; and, adapted as they are to supply all the products of the tropics, they will become a valuable appendage to those states; but, I deem the idea entertained by many, who suppose they ever can become so powerful as to command those states, to be a mistake. So far as the consumption of a small amount of manufactures go, and the convenience of our whaling fleet, but no farther, they will be beneficial to the United States. In this relation, the character of the government becomes a source of solicitude to us. It

is the interest of the United States that they should maintain the neutrality that they seek to establish, and should not be permitted to fall into the hands of any other power.

I am rather disposed to think that, in the progress of civilization in the South Seas, this group will be considered of less importance than it now appears, and instead of its being looked to as it now is, as a point of attraction, or a place wherein to obtain information and supplies, it will be only visited by whalers for recruiting. Their growth has already arrived at the greatest extent to which it can ever reach. A direct communication with Oregon and California will do away with the necessity of intercourse through the islands; they must, consequently, be left to their own resources to maintain trade; and when California and the Oregon Territory can afford the whalers equal advantages, which, when settled, they will do in a few years; the advantages derived from this source will be withdrawn. Unfortunately for these islands, a fictitious importance has been ascribed to their geographical position, in the belief that much political ascendency in the Pacific must accrue to the nation which may possess them; this state of opinion has been brought about by the exertions of the American missionaries, who have been the means of raising the natives so rapidly in the scale of civilization, and from whose success our countrymen have acquired much influence. This ascendency, however, has been partly the means of provoking a sectarian war, which has brought about much trouble, and been the cause of great distress both to the king and people. These troubles have probably been of some advantage to the people, and afforded the means of increasing their wealth, and causing a demand for their products, which, though trifling as to amount, yet in such a small community has been sensibly felt, and has enabled them to obtain many advantages they could not have had otherwise. I have some doubt whether the Hawaiian Islands can ever become an independent nation by the exertion of their own people, since they have unwisely invited foreigners to reside among them, and given them equal rights and privileges with natives. Endeavours are now making to introduce foreign labourers and capital, which, although proceeding from a disposition to advance and develope the resources of the islands, will have a tendency to injure the native labouring population. The introduction of foreign labour will necessarily bring with it foreign habits and custom, which the natives are, even now, too prone to imitate; and the examples that are set before them are generally, if not always, of the worst description.

The inducements held out to the king and chiefs to make large

grants of land to foreigners, have been great; but such grants can never be carried into effect without endangering the very existence of the government and people. In all cases that came within my knowledge on the islands, the object of the majority of foreign residents was solely to increase their own wealth; and on the accumulation of a sufficient amount, they withdraw from the islands, taking their capital with them; and this will always be the case. So far, therefore, as their influence goes, instead of enriching the islanders, their exertions have in some degree had a contrary effect, and the result does not justify those engaged in mercantile pursuits, in attributing the advancement of the islands to themselves; on the contrary, they leave very little but evil habits and vices behind them. Few foreigners have made any permanent improvements, and when they have, they pass into the hands of others, to the exclusion of the natives, who are looked upon and treated as slaves.

It is impossible for a disinterested person to reside any time among these natives, without imbibing a strong interest in the progress of their institutions, and the developement of their government. In the Hawaiians are seen many things to condemn; but they have, on the other hand, many good qualities, which their religious instructors are endeavouring by every means in their power to foster and develope. In taking leave of them, I cannot recall a single instance in which they did not conduct themselves towards us with a full belief that they were acting right; and I feel rejoiced to say, that during all our intercourse with them, no incident occurred to mar the harmony which existed on our first arrival. I am, indeed, fully persuaded that with proper attention and forbearance no difficulties will ever occur. One thing, however, ought always to be borne in mind on visiting this island, viz., that too much credit must not be given to those who will on your first arrival endeavour to impress on you their own views of the character of the people, and of those who have been their benefactors, and are constant in their exertions to promote the welfare of those they live among. The natives and the latter class are far better able to judge what the islands require or stand in need of than any casual visiter, or he who may be a sojourner only for a few weeks.

I shall always think with pleasure and satisfaction of the many friends we left here; and I am fully satisfied, that, with few exceptions, and those growing out of a mistaken zeal, our country has just reason to be proud of the advance these islanders have made within the last twenty-five years in civilization, morals, and religion, an ad-

vance that has been almost wholly the work of our citizens, either at home or abroad, the one in furnishing the means, the other in giving the instruction.

The Expedition had become so much identified with the history of these islands during our stay, that we were made familiar with all the village scandal. Few who live in such small places are aware how unfavourable an impression they make upon visiters, and the bad light in which they appear, by this habit of talking of each other; whatever may be the terms on which they associate together, or however discordant the materials of which the society is composed, they would do well to avoid showing their uncharitable feelings, or making use of detraction to create a bias against others.

On the afternoon of the 27th November, the squadron being prepared, we took leave of our kind friends, and particularly of those belonging to the mission, to whom I feel under many obligations for their uniform kindness to us. We then joined our vessels, and at 8 P. M. took our final leave of the Hawaiian Islands.

At midnight, signal was made to heave-to, in order that I might finish the instructions for the different vessels. Although it was out of my power to visit Japan, I had determined if possible to ascertain the character of the currents off that island. I therefore directed the Porpoise and Oregon to follow out, and explore the shoals and reefs extending in a west-northwest direction from the Hawaiian Islands,* and proceed until they fell in with the current or stream that is supposed by some to set along the coasts of Japan, and resemble the Gulf Stream off our own coast. This done, they were ordered to proceed through the China Seas, to Singapore, in the Straits of Malacca.

With the Vincennes and tender it was my intention to proceed to Strong's and Ascension Islands, which the Peacock had been unable to reach in her cruise, examining every shoal that might lie in my way, and thence to Manilla. I proposed on leaving that port to explore and survey the Sooloo Archipelago, then proceeding to Singapore to meet the brigs, fill up with provisions, and thence sail for the United States, where it was incumbent on me to arrive by the 31st of May following. This, agreeably to my promise to my crew a year previous, left me just six months to perform the duty, of which at least one hundred and forty days were required for the actual passage.

We parted company from the brigs the next day at noon, and bore away under all sail to the southward and westward. At 4 P. M., the

* For the instructions of Lieutenant-Commandant Ringgold, see Appendix X.

Flying-Fish made the signal "in want of assistance;" and on coming within hail, reported that her mainmast was sprung. Carpenters were at once sent on board, who reported that the mast was quite sound: the vessels were reduced to easy sail for the night in order to keep in company, as I intended in the morning, when the sea should have decreased, to have a farther examination of it.

I had now the prospect of another obstacle, in the delays this vessel must occasion me with a sprung mast, if such should prove to be the case, which I could, however, scarcely bring myself to believe. In order to secure an examination of the Sooloo Sea, which was a part of my original instructions, I determined to give Mr. Knox orders to act by himself, in case I found it necessary to push at once to Manilla and avoid detention, directing him to touch at Strong's and Ascension Islands, and to part company if she proved to be sound in her spars after a few days' trial, which the sea and wind then prevailing would fully prove. As soon as I came to this conclusion, Mr. Knox was sent for, Assistant-Surgeon Whittle, a carpenter, and two extra men ordered to join the tender, and my instructions relative to his proceedings, which will be found in Appendix XI., fully explained to him. On the 30th, we parted company with her, being in the latitude of Maloon's Island, and one hundred and ten miles due east of it: I steered a west course through the night under easy sail. At daylight sail was again made, and by noon we found the ship, by good observations, in latitude 19° 19′ N., longitude 165° 25′ W. The supposed position of the island being in latitude 19° 20′ N., and longitude 165° 20′ W., we had consequently passed directly over the place, with the weather so clear as to render all objects within a radius of fifteen miles perfectly distinct, and with two look-outs at the masthead, yet no signs of land were visible. I continued in its latitude until we had passed seventy miles to the westward, when we steered for another island, laid down in Arrowsmith's charts in longitude 166° 48′ W., and latitude 19° 17′ N. On its parallel, we ran for sixty miles east and west of the assigned place; but in like manner, there was nothing perceived that indicated any proximity to land.

On the 3d of December, we ran over the locality of a shoal, lying in 170° 30′ W., and latitude 18° 20′ N. This was likewise searched for, over a space of sixty miles east and west of its supposed locality.

Jane's Island, supposed to be in longitude 173° 15′ W., latitude 16° 10′ N., was next searched for. In doing this, I was greatly surprised to find that we had entered a strong current setting to the northward and westward. Our difference of latitude showed 24′, and we were at once compelled to haul up to the southward, to reach the supposed

locality of the island. We passed about five miles to the westward of its place, but no sign of land was seen. This was the first day since leaving Oahu, that we were able to write with any degree of comfort, the sea having become perfectly smooth.

I was at first disposed to doubt the accuracy of the observations for latitude, but the next day (5th December) proved them to be correct, nearly the same difference having occurred.

On the 6th, we reached the position of Gaspar Island, in latitude 15° N., and as the different localities assigned it varied considerably in longitude, I determined to run on its parallel until I had passed them all.

On the 7th, we dropped a day, passing into east longitude. Our winds had become light, varying from the east to the southwest quarters, and it was generally calm throughout the night, so that we made little progress.

On the 10th, the current was found setting west-southwest three quarters of a mile, both by the difference of the observations, and the current-log. The pot, at this time, was seen at thirty-two fathoms depth, several fathoms lower than at any previous observation. The temperature of the water was 81°, the day fine, and beautifully clear.

We continued on the parallel of latitude 15° N. until the 14th, when we found ourselves in the longitude of 174° 50′ E., having passed over all the localities assigned the island, between longitude 175° W. and 174° 20′ E. I am fully satisfied that it does not exist within those meridians.

Having been thus retarded, the fear I entertained of meeting with light, and in all probability, westerly winds, determined me to forego my visit to Strong's and Ascension Islands, and haul to the northward, to look for some of the many shoals laid down on the track usually pursued by ships bound to the China Seas.

After this determination was made, I hauled up for an island said to exist in longitude 171° 42′ E., and latitude 16° N. On the night of the 15th we hove-to in order to run over the locality by daylight. This position was passed over, and forty miles to the westward of it explored, but nothing indicating a proximity to land was seen. The supposed site of Cornwallis Island, in longitude 169° 33′ E., and latitude 16° 51′ N., was in like manner passed over.

Wake's Island next claimed my attention. On the 19th we reached its parallel, and hove-to till daylight of the 20th, when we discovered it, bearing west-by-north, about nine miles distant. The wind was light from the north-northeast. After breakfast, several boats were sent to survey the island. Wake's Island is a low coral one, of triangular form, and eight feet above the surface. It has a large lagoon

in the centre, which was well filled with fish of a variety of species; among these were some fine mullet. There is no fresh water on the island, and neither pandanus nor cocoa-nut trees. It has upon it the shrubs which are usually found on the low islands of the Pacific, the most abundant of which was the Tournefortia. Mr. Peale found here the short-tailed albatross, and procured an egg from its nest. The birds were quite tame, although they were not so numerous as we had before met with on uninhabited islands.

The time of low water took place at one o'clock, and the moon entered its last quarter on the same day: the tide was setting along the shore of the island with much strength to the westward; the rise and fall was three feet. From appearances, the island must be at times submerged, or the sea makes a complete breach over it; the appearance of the coral blocks and of all the vegetation leads to this conclusion, for they have a very decided inclination to the eastward, showing also that the violent winds or rush of the water, when the island is covered, are from the westward. The reef around this island is very small in extent.

The position of Wake's Island was found by my observations of equal altitudes on shore to be in longitude 166° 31′ 30″ E., and latitude 19° 10′ 54″ N.

By four o'clock, P. M., all the boats had returned on board, when we filled away and proceeded on our course to the westward. Although these coral islands resemble one another very strongly, yet they afforded us some recreation for a few hours, and much satisfaction in obtaining series of observations in magnetism. Our visit to Wake's Island gave us an opportunity of adding to our collections in natural history.

In the evening we steered to pass over the position of Halcyon Island,—longitude 163° 30′ E., latitude 19° 13′ N.; and on the 27th, we passed immediately over its locality, and had run on its supposed parallel fifty miles on each side of it, but nothing was seen of it. We now felt the current to the southeast twelve miles in the twenty-four hours.

Folger's Island next claimed my attention: it is said to lie in longitude 155° 19′ E., latitude 18° 21′ N. This position was passed over, but the inquiry resulted as the others had, in a fruitless search.

I now bore away for Grigan, the northernmost of the inhabited Ladrone or Marian Islands, which we made on the 29th December, at 7 A. M., bearing south-southwest. As we approached these islands, we had experienced a strong current to the northward and westward; and the wind had also veered to the southward and westward.

At midnight, we discovered the island of Assumption, bearing north-east-by-east.

The island of Grigan appears to be about eight miles in width, seen from the north, and has the form of a dome. Its height, by a very unsatisfactory observation, was two thousand three hundred feet. It was my intention to stop and make it a magnetic station; but the weather appeared so thick as to threaten delay; and this I could ill afford, so I gave up the idea.

There is said to be no other settlement than one small village, on the southwest side of Grigan, where a few individuals dwell, and I understood that they were headed by an American; its shores are almost perpendicular, and it has no coral reefs to form harbours; so that in this respect it is not so much favoured as the southern isles of the same group. The passage between Grigan and Assumption is free from dangers, and I am well satisfied that no shoal exists where Freycinet has laid down the Mangs, for we passed directly over the locality, and saw nothing of the kind. The Mangs were seen in their true position, to the northward of Assumption.

The wind was light and variable. On the 1st of January, 1842, it changed to the southwest; with this change of wind we experienced a fall both of the thermometer and barometer, and excessive dampness; we had some lightning, and at midnight a violent squall with rain burst upon us, attended by a shift of wind to the northward and westward, which afterwards hauled to the northward and eastward. A slight current was felt setting to the eastward.

We now steered for the most eastern position assigned to Copper's Island, as it will no doubt be recollected that we ran over its supposed position in west longitude, on the passage between San Francisco and Oahu, mentioned in the first part of this chapter. On the 4th, we ran over the position in longitude 131° 54′ E., and latitude 20° 11′ N. The Abajos Shoal of Arrowsmith has no existence; its position was passed over in broad daylight.

On the 5th, we felt a current to the west of fifteen miles. The variations of the compass were now to the westward; much phosphorescence in the water; its temperature was 75°. The slight current continued until the 8th, when we made the islands of Sabtang and Batan on the starboard side, and the Richmond Rocks on the larboard, steering a westerly course through the Balingtang Straits. The weather being remarkably fine, we had excellent observations on transit bearing. The longitude of the west point of Sabtang is 121° 50′ 30″ E., the latitude is in 20° 18′ N., instead of 20° 11′ N. In the strait we had strong ripples, and occasionally felt the influence of the current, as we passed through them.

We had now left the Pacific Ocean, and I could not but rejoice that we had all the results of our cruise up to this time quite safe.

Sabtang and Batan are of broken surface, shooting up into many remarkable peaks, to the elevation of a thousand feet. These are both inhabited, and afford one or two anchorages.

In the route from Oahu, we had experienced a set to the westward of four hundred miles by current; the greater part of this was felt before reaching the meridian of the Ladrone Islands.

I now stood to the southward along the island of Luzon, to pass just clear of Cape Bolinao. On the 9th, we continued to have very strong winds. A very heavy sea arose, without apparent cause; the progressing motion of the waves in passing the ship was twenty-two miles per hour; their width, as near as it could be ascertained, was one hundred and forty yards.

At sunset of the 10th, we were off Cape Capones, and numerous lights were seen on shore. The breeze failed us after midnight, and in the morning we found that we had drifted some thirty miles to the leeward of Cape Miravales, having Cape Capones due north, the current having set to the southward. As the breeze was adverse to our entrance into the bay, we continued beating until the afternoon, when the sea-breeze gave us the hope of reaching the anchorage; but it was so feeble that we made no way, and the night was again passed under sail.

The next day, the 12th, was also passed in working up for the city of Manilla. For this delay I had something to console me in the arrival of the Flying-Fish, which vessel was discovered at $3^h\ 30^m$ P. M. beating in. Signal was made for her to join company.

On arriving at the island of Corregidor, we were boarded by a government galley, pulling sixteen oars, and having a large brass twelve-pound piece mounted on the bow. These vessels, I understood, are intended principally to pursue the pirates of Sooloo, who not unfrequently make excursions among the islands, attacking the villages, and carrying off the inhabitants as slaves. They are manned by the natives of this island, who are represented as active and expert sailors, although they are, generally, of small size.

After dark, we anchored about eight miles from the city, in the middle of the broad and beautiful expanse of its bay, which is nearly circular, with an almost uniform depth of water. I learned, whilst at Manilla, that since the settlement of Europeans, the bay has filled up in places very considerably, from the wash of the hills. The lands in the vicinity are high and mountainous, and are clothed with the vegetation of the tropics. After dark, the many lights that were seen in the direction of the city gave the bay an animated appearance, and bespoke our being near a large and active population.

Mr. Knox reported to me that after his separation, on the 30th of

November, he stood for the position of Cornwallis Island, as laid down by Arrowsmith in longitude 169° 31′ W., latitude 16° 50′ N., without seeing any indication of land. Twenty-two miles to the south-by-east of this position, he discovered a reef, which surrounded an extensive lagoon, extending northeast and southwest ten miles, and in the opposite direction five miles. On the northwest side of this reef there are two low islets: the one to the westward was covered with bushes, but no trees; the other was no more than a sand-bank. This reef lies deep. The longitude of the westernmost islet was found to be 169° 45′ 36″ W., and latitude 16° 48′ N. He then bore away for San Pedro of Arrowsmith, in longitude 179° 00′ W., and latitude 11° 17′ N., and on the 7th of December sailed over it and on its parallel forty miles both east and west, but saw no indications of land whatever.

The Mulgrave Islands were steered for, and two small islands made on the 16th, in the position of longitude 172° 02′ 33″ E., and latitude 5° 59′ 15″ N., which corresponds with the chart of Arrowsmith. They are low islets, extending two miles from north to south, and one and a half from east to west. They are connected by a reef, which surrounds a lagoon. Natives were seen upon them, but no communication was had with them.

Bapham's, a lagoon island, was made on the 17th: it was found to be correctly located; it is also inhabited.

Hunter's Island was made the same evening, and was examined the next day: it is one and three quarters of a mile long, north and south, and two-thirds of a mile east and west; it is elevated in the centre, and has no lagoon; its position was ascertained to be in longitude 169° 05′ 46″ E., and latitude 5° 42′ N.

Baring's Island was next passed in 168° 26′ 24″ E., latitude 5° 34′ 42″ N. The current experienced off these islands was from fifteen to twenty-five miles easterly.

It having been strongly enjoined upon Mr. Knox not to be behind the time designated for his arrival at Manilla, he found, on his reaching the equator, that but twenty-two days of his time remained: having already experienced light winds and calms, he saw that it would be impossible to range through the Caroline Group and visit Ascension and Strong's Islands; he therefore determined to haul again to the northward, and passed several of the groups in a higher latitude,

On the 26th, he passed over the situation ascribed to Faroilip Island, in latitude 10° 45′ N., longitude 146° 27′ E., without any indications of land. He then sought Feis Island, whose position was crossed on the 27th, but saw no land.

The eastern extremity of M'Kenzie's Group was made on the 29th, in latitude 10° 07′ 53″ N., longitude 139° 54′ 58″ E. To the northward and westward of it, a supposed shoal was passed over, but none was found.

M'Kenzie's Group is of greater extent than is represented on the maps. It is composed of a great many islets, with passages between them, some of them into the lagoon, through one of which the schooner entered, with not less than seven fathoms water on the bar. This group is thickly inhabited, and some of the natives boarded the schooner. They resembled the Caroline Islanders, but had their teeth much discoloured, apparently from the use of the betel-nut. From them some fish and cocoa-nuts were procured. They were seen to be in possession of iron utensils, and appeared to have before had communication with vessels.

Mr. Knox now steered for the Straits of Bernadino, and made Cape Espiritu Santo, on the night of the 4th of January. Owing to the want of observations for two days before, he was in danger of being shipwrecked. On the 11th, he had passed through the straits, and anchored under Cape St. Jago, whence he got under way, and reached Manilla, as before stated.

I now felt myself secure against farther detention, and hoped to expedite my duties, so as to reach Singapore in the time designated in my instructions.

MANILLA BANCA.

CHAPTER VIII.

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CHAPTER VIII.

MANILLA.

1842.

At daylight, on the 13th of January, we were again under way, with a light air, and at nine o'clock reached the roadstead, where we anchored in six fathoms water, with good holding-ground. Being anxious to obtain our letters, which, we were informed at Oahu, had been sent to Manilla, I immediately despatched two boats to procure them. On their way to the mole, they were stopped by the captain of the port, Don Juan Salomon, who requested them, in a polite manner, to return, and informed the officers that, agreeably to the rules of the port, no boat was permitted to land until the visit of the health-officer had been made, &c.

The captain of the port, in a large barge, was soon seen pulling off in company with the boats. He boarded us with much ceremony, and a few moments sufficed to satisfy him of the good health of the crew, when he readily gave his assent to our visiting the shore. Every kind of assistance was offered me, on the part of the government, and he, in the most obliging manner, gave us permission to go and come when we pleased, with the simple request that the boats should wear our national flag, that they might at all times be known, and thus be free from any interruption by the guards. The boats were again despatched for the consul and letters, and after being anxiously watched for, returned; every one on board ship expecting his wishes to be gratified with news from home; but, as is usual on such occasions, the number of the happy few bore no comparison to that of the many who were disappointed.

Our vice-consul, Josiah Moore, Esq., soon paid us a visit, and gave us a pressing invitation to take up our quarters on shore while we remained. To this gentleman and Mr. Sturges I am greatly indebted

for much of the information that will be detailed in the following chapter.

A number of vessels were lying in the roads, among which were several Americans loading with hemp. There was also a large English East Indiaman, manned by Lascars, whose noise rendered her more like a floating Bedlam than any thing else to which I can liken it.

The view of the city and country around Manilla partakes both of a Spanish and an Oriental character. The sombre and heavy-looking churches, with their awkward towers; the long lines of batteries mounted with heavy cannon; the massive houses, with ranges of balconies; and the light and airy cottage, elevated on posts, situated in the luxuriant groves of tropical trees,—all excite a desire to become better acquainted with the country.

Manilla is situated on an extensive plain, gradually swelling into distant hills, beyond which, again, mountains rise in the background, to the height of several thousand feet. The latter are apparently clothed with vegetation to their summits. The city is in strong contrast to this luxuriant scenery, bearing evident marks of decay, particularly in the churches, whose steeples and tile roofs have a dilapidated look. The site of the city does not appear to have been well chosen, it having apparently been selected entirely for the convenience of commerce, and the communication that the outlet of the lake affords for the batteaux that transport the produce from the shores of the Laguna de Bay to the city.

There are many arms or branches to this stream, which have been converted into canals; and almost any part of Manilla may now be reached in a banca.

In the afternoon, in company with Captain Hudson, I paid my first visit to Manilla. The anchorage considered safest for large ships is nearly three miles from the shore, but smaller vessels may lie much nearer, and even enter the canal; a facility of which a number of these take advantage, to accomplish any repairs they may have occasion to make.

The canal, however, is generally filled with coasting vessels, batteaux from the lake, and lighters for the discharge of the vessels lying in the roads. The bay of Manilla is safe, excepting during the change of the monsoons, when it is subject to the typhoons of the China Seas, within whose range it lies. These blow at times with much force, and cause great damage. Foreign vessels have, however, kept this anchorage, and rode out these storms in safety; but native as well as Spanish vessels, seek at these times the port of Cavite, about three leagues to the southwest, at the entrance of the bay, which is perfectly secure.

Here the government dockyard is situated, and this harbour is consequently the resort of the few gunboats and galleys that are stationed here.

The entrance to the canal or river Pasig is three hundred feet wide, and is enclosed between two well-constructed piers, which extend for some distance into the bay. On the end of one of these is the light-house, and on the other a guard-house. The walls of these piers are about four feet above ordinary high water, and include the natural channel of the river, whose current sets out with some force, particularly when the ebb is making in the bay.

The suburbs, or Binondo quarter, contain more inhabitants than the city itself, and is the commercial town. They have all the stir and life incident to a large population actively engaged in trade, and in this respect the contrast with the city proper is great.

The city of Manilla is built in the form of a large segment of a circle, having the chord of the segment on the river: the whole is strongly fortified, with walls and ditches. The houses are substantially built after the fashion of the mother country. Within the walls are the governor's palace, custom-house, treasury, admiralty, several churches, convents, and charitable institutions, a university, and the barracks for the troops; it also contains some public squares, on one of which is a bronze statue of Charles IV.

The city is properly deemed the court residence of these islands; and all those attached to the government, or who wish to be considered as of the higher circle, reside here; but foreigners are not permitted to do so. The houses in the city are generally of stone, plastered, and white or yellow washed on the outside. They are only two stories high, and in consequence cover a large space, being built around a patio or courtyard.

The ground-floors are occupied as storehouses, stables, and for porters' lodges. The second story is devoted to the dining-halls and sleeping apartments, kitchens, bath-rooms, &c. The bed-rooms have the windows down to the floor, opening on wide balconies, with blinds or shutters. These blinds are constructed with sliding frames, having small squares of two inches filled in with a thin semi-transparent shell, a species of Placuna; the fronts of some of the houses have a large number of these small lights, where the females of the family may enjoy themselves unperceived.

After entering the canal, we very soon found ourselves among a motley and strange population. On landing, the attention is drawn to the vast number of small stalls and shops with which the streets are lined on each side, and to the crowds of people passing to and fro,

all intent upon their several occupations. The artisans in Manilla are almost wholly Chinese; and all trades are local, so that in each quarter of the Binondo suburb the privilege of exclusive occupancy is claimed by some particular kinds of shops. In passing up the Escolta (which is the longest and main street in this district), the cabinet-makers, seen busily at work in their shops, are first met with; next to these come the tinkers and blacksmiths; then the shoemakers, clothiers, fishmongers, haberdashers, &c. These are flanked by outdoor occupations; and in each quarter are numerous cooks, frying cakes, stewing, &c., in movable kitchens; while here and there are to be seen betel-nut sellers, either moving about to obtain customers, or taking a stand in some great thoroughfare. The moving throng, composed of carriers, waiters, messengers, &c., pass quietly and without any noise: they are generally seen with the Chinese umbrella, painted of many colours, screening themselves from the sun. The whole population wear slippers, and move along with a slipshod gait.

The Chinese are apparently far more numerous than the Malays, and the two races differ as much in character as in appearance: one is all activity, while the other is disposed to avoid all exertion. They preserve their distinctive character throughout, mixing but very little with each other, and are removed as far as possible in their civilities; the former, from their industry and perseverance, have almost monopolized all the lucrative employments among the lower orders, excepting the selling of fish and betel-nut, and articles manufactured in the provinces.

On shore, we were kindly received by Mr. Moore, who at once made us feel at home. The change of feeling that takes place in a transfer from shipboard in a hot climate, after a long cruise, to spacious and airy apartments, surrounded by every luxury that kind attentions can give, can be scarcely imagined by those who have not experienced it.

As we needed some repairs and supplies, to attend to these was my first occupation. Among the former, we required a heavy piece of blacksmith-work, to prepare which, we were obliged to send our armourers on shore. The only thing they could procure was a place for a forge; but coal, and every thing else, we had to supply from the ship. I mention these things to show that those in want of repairs must not calculate upon their being done at Manilla with despatch, if they can be accomplished at all.

The city government of Manilla was established on the 24th of June, 1571, and the title under which it is designated is, "The cele-

brated and for ever royal city of Manilla." In 1595, the charter was confirmed by royal authority; and all the perogatives possessed by other cities in the kingdom were conferred upon it in 1638. The members of the city council, by authority of the king, were constituted a council of advisement with the governor and captain-general. The city magistrates were also placed in rank next the judges; and in 1686 the jurisdiction of the city was extended over a radius of five leagues. In 1818, the number of the council were increased and ordered to assume the title of "Excellency." Manilla has been one of the most constantly loyal cities of the Spanish kingdom, and is, in consequence, considered to merit these additional royal favours to its inhabitants.

In 1834, the Royal Tribunal of Commerce was instituted, to supersede the old consulate, which had been established since 1772. The Royal Tribunal of Commerce acts under the new commercial code, and possesses the same privileges of arbitration as the old consulate. It consists of a prior, two consuls, and four deputies, elected by the profession. The three first exercise consular jurisdiction, the other four superintend the encouragement of commerce. The "Junta de Comercio" (chamber of commerce) was formed in 1835. This junta consists of the tribunal of Commerce, with four merchants, who are selected by the government, two of whom are removed annually. The prior of the Tribunal presides at the Junta, whose meetings are required to be held twice a month, or oftener if necessary, and upon days in which the Tribunal is not in session. The two courts being under the same influences, and having the same officers, little benefit is to be derived from their double action, and great complaints are made of the manner in which business is conducted in them.

Of all her foreign possessions, the Philippines have cost Spain the least blood and labour. The honour of their discovery belongs to Magelhaens, whose name is associated with the straits at the southern extremity of the American continent, but which has no memorial in these islands. Now that the glory which he gained by being the first to penetrate from the Atlantic to the Pacific, has been in some measure obliterated by the disuse of those straits by navigators, it would seem due to his memory that some spot among these islands should be set apart to commemorate the name of him who made them known to Europe. This would be but common justice to the discoverer of a region which has been a source of so much honour and profit to the Spanish nation, who opened the vast expanse of the Pacific to the fleets of Europe, and who died fighting to secure the benefits of his enterprise to his king and country.

Magelhaens was killed at the island of Matan, on the 26th of April, 1521; and Duarte, the second in command, who succeeded him, imprudently accepting an invitation from the chief of Febri to a feast, was, with twenty companions, massacred. Of all the Spaniards present, only one escaped. After these and various other misfortunes, only one vessel of the squadron, the Victoria, returned to Spain. Don Juan Sebastian del Cano, her commander, was complimented by his sovereign by a grant for his arms of a globe, with the proud inscription, commemorative of his being the first circumnavigator,

"PRIMUS ME CIRCUMCEDIT."

Two years afterwards, a second expedition was fitted out, under the command of Loaisa, who died after they had passed through the Straits of Magelhaens, when they had been a year on their voyage. The command then fell upon Sebastian, who died in four days after his predecessor. Salayar succeeded to the command, and reached the Ladrone Islands, but shortly after leaving there he died also. They came in sight of Mindanao, but contrary winds obliged them to go to the Moluccas. When arrived at the Portuguese settlements, contentions and jealousies arose, and finally all the expedition was dispersed, and the fate of all but one of the vessels has become doubtful. None but the small tender returned, which, after encountering great difficulties, reached New Spain.

The third expedition was fitted out by Cortes, then viceroy of Mexico, and the command of it given to Sarvedra. This sailed from the port of Silguattanjo, on the 31st of October, 1528, and stopped at the Ladrone Islands, of which it took possession for the crown of Spain. It afterwards went to Mindanao, and then pursued its voyage to Timor, where part of the expedition of Loaisa was found remaining. From Timor they made two attempts to return to New Spain, both of which failed. The climate soon brought on disease, which carried off a great number, and among them Sarvedra. Thus the whole expedition was broken up, and the survivors found their way to the Portuguese settlements.

The fourth expedition was sent from New Spain, when under the government of Don Antonio de Mendoza, for the purpose of establishing a trade with the new islands, and it received orders not to visit the Moluccas. This expedition sailed in 1542, under the command of Villalobos. It reached the Philippine Islands without accident, and Villalobos gave them that name after Philip II., then prince of Asturias. Notwithstanding his positive instructions to the contrary, he was obliged to visit the Moluccas, and met the same treatment from the

Portuguese that had been given to all whom they believed had any intention to interfere in their spice trade. The squadron touched at Amboina, where Villalobos died, an event which caused the breaking up of the expedition; and the few Spaniards that remained embarked in the Portuguese vessels to return home.

The fifth and last expedition was ordered by Philip II. to be sent from Mexico, when under the government of Don Luis de Velasco, for the final conquest and settlement of the Philippines. With this expedition was sent Andres Urdaneta, a friar, whose reputation stood very high as a cosmographer: he had belonged to the ill-fated expedition of Loaisa. This was the largest that had yet been fitted out for this purpose, numbering five vessels and about four hundred men. The command of it was intrusted to Segaspi, under whom it sailed from the port of Natividad, on the 21st of November, 1564, and upon whom was conferred the title of governor and adelantado of the conquered lands, with the fullest powers. On the 13th of February, 1565, he arrived at the island of Tandaya, one of the Philippines: from thence he went to Leyte; there he obtained the son of a powerful chief as a guide, through whom he established peace with several of the native rulers, who thereafter aided the expedition with all the means in their power. At Bohol they built the first church. There he met and made peace with a chief of Luzon, with whom he went to that island.

He now (April 1565) took possession of all the island in the name of the crown of Spain, and became their first governor. In this conquest, motives different from those which governed them on the American continent, seemed to have influenced the Spaniards. Instead of carrying on a cruel war against the natives, they here pursued the policy of encouraging and fostering their industry. Whether they felt that this policy was necessary for the success of their undertaking, or were influenced by the religious fathers who were with them, is uncertain; but their measures seem to have been dictated by a desire to promote peace and secure the welfare of the inhabitants. There may be another cause for this course of action, namely, the absence of the precious metals, which held out no inducement to those thirsting for inordinate gain. This may have had its weight in exempting the expedition in its outfit from the presence of those avaricious spirits which had accompanied other Spanish expeditions, and been the means of marking their progress with excessive tyranny, bloodshed, and violence. It is evident to one who visits the Philippines that some other power besides the sword has been at work in them; the natives are amalgamated with the Spaniards, and all seem disposed to cultivate the land and foster civilization. None of the feeling that grows out of

conquest is to be observed in these islands; the two races are identified now in habits, manners, and religion, and their interests are so closely allied that they feel their mutual dependence upon each other.

The establishment of the new constitution in Spain in the year 1825, has had a wonderful effect upon these colonies, whose resources have within the last ten years been developed, and improvements pushed forward with a rapid step. Greater knowledge and more liberal views in the rulers are alone wanting to cause a still more rapid advance in the career of prosperity.

As our visit was to Luzon, we naturally obtained more personal information respecting it than the other islands. We learned that the northern peninsula* was composed of granite and recent volcanic rocks, together with secondary and tertiary deposits, while the southern peninsula is almost wholly volcanic.

The northern contains many valuable mines of gold, lead, copper, and iron, besides coal. A number of specimens of these, and the rocks which contain them, were presented to the Expedition by Señors Araria and Roxas of Manilla. These will claim particular attention in the Geological Report, to which the reader is referred for information.

So far as our information and observations went, the whole of the Philippine Islands are of similar geological formation. In some of the islands the volcanic rock prevails, while in others coal and the metalliferous deposits predominate. On some of them the coal-beds form part of the cliffs along the shore; on others, copper is found in a chlorite and talcose slate. The latter is more particularly the case with Luzon, and the same formation extends to Mindoro. Much iron occurs on the mountains. Thus, among the Tagala natives, who are yet unsubdued by the Spaniards, and who inhabit these mountains, it is found by them of so pure a quality that it is manufactured into swords and cleavers. These are, occasionally, obtained by the Spaniards in their excursions into the interior against these bands.

The country around Manilla is composed of tufa of a light gray colour, which being soft and easily worked, is employed as the common building material in the city. It contains, sometimes, scoria and pumice, in pieces of various sizes, besides, occasionally, impressions of plants, with petrified woods. There are confined to recent species, and include palms, &c.

This tufa forms one of the remarkable features of the volcanoes of

* It is called so in consequence of the island being nearly divided in the parallel of 14° N., by two bays.

the Philippine Islands, showing a strong contrast between them and those of the Pacific isles, which have ejected little else than lava and scoria.

Few portions of the globe seem to be so much the seat of internal fires, or to exhibit the effects of volcanic action so strongly as the Philippines. During our visit, it was not known that any of the volcanoes were in action; but many of them were smoking, particularly that in the district of Albay, called Isaroc. Its latest eruption was in the year 1839; but this did little damage compared with that of 1814, which covered several villages, and the country for a great distance around, with ashes. This mountain is situated to the southeast of Manilla one hundred and fifty miles, and is said to be a perfect cone, with a crater at its apex.

It does not appear that the islands are much affected by earthquakes, although some have occasionally occurred that have done damage to the churches at Manilla.

The coal which we have spoken of is deemed of value; it has a strong resemblance to the bituminous coal of our own country, possesses a bright lustre, and appears very free from all woody texture when fractured. It is found associated with sandstone, which contains many fossils. Lead and copper are reported as being very abundant; gypsum and limestone occur in some districts. From this, it will be seen that these islands have every thing in the mineral way to constitute them desirable possessions.

With such mineral resources, and a soil capable of producing the most varied vegetation of the tropics, a liberal policy is all that the country lacks. The products of the Philippine Islands consist of sugar, coffee, hemp, indigo, rice, tortoise-shell, hides, ebony, saffron-wood, sulphur, cotton, cordage, silk, pepper, cocoa, wax, and many other articles. In their agricultural operations the people are industrious, although much labour is lost by the use of defective implements. The plough, of very simple construction, has been adopted from the Chinese; it has no coulter, the share is flat, and being turned partly to one side, answers, in a certain degree, the purpose of a mould-board. This rude implement is sufficient for the rich soils, where the tillage depends chiefly upon the harrow, in constructing which a thorny species of bamboo is used. The harrow is formed of five or six pieces of this material, on which the thorns are left, firmly fastened together. It answers its purpose well, and is seldom out of order. A wrought-iron harrow, that was introduced by the Jesuits, is used for clearing the ground more effectually, and more particularly for the purpose of extirpating a troublesome grass, that is known by the name of cogon (a

species of Andropogon), of which it is very difficult to rid the fields. The bolo or long-knife, a basket, and hoe, complete the list of implements, and answer all the purposes of our spades, &c.

The buffalo was used until within a few years exclusively in their agricultural operations, and they have lately taken to the use of the ox; but horses are never used. The buffalo, from the slowness of his motions, and his exceeding restlessness under the heat of the climate, is ill adapted to agricultural labour; but the natives are very partial to them, notwithstanding they occasion them much labour and trouble in bathing them during the great heat. This is absolutely necessary, or the animal becomes so fretful as to be unfit for use. If it were not for this, the buffalo would, notwithstanding his slow pace, be most effective in agricultural operations; he requires little food, and that of the coarsest kind; his strength surpasses that of the stoutest ox, and he is admirably adapted for the rice or paddy fields. They are very docile when used by the natives, and even children can manage them; but it is said they have a great antipathy to the whites, and all strangers. The usual mode of guiding them is by a small cord attached to the cartilage of the nose. The yoke rests on the neck before the shoulders, and is of simple construction. To this is attached whatever it may be necessary to draw, either by traces, shafts, or other fastenings. Frequently this animal may be seen with large bundles of bamboo lashed to them on each side. Buffaloes are to be met with on the lake with no more than their noses and eyes out of the water, and are not visible until they are approached within a few feet, when they cause alarm to the passengers by raising their large forms close to the boat. It is said that they resort to the lake to feed on a favourite grass that grows on its bottom in shallow water, and which they dive for. Their flesh is not eaten, except that of the young ones, for it is tough and tasteless. The milk is nutritious, and of a character between that of the goat and cow.

The general appearance of the buffalo is that of a hybrid of the bull and rhinoceros. Its horns do not rise upwards, are very close at the root, bent backwards, and of a triangular form, with a flat side above. One of the peculiarities of the buffalo is its voice, which is quite low, and in the minor key, resembling that of a young colt. It is as fond of mire as swine, and shows the consequence of recent wallowing, in being crusted over with mud. The skin is visible, being but thinly covered with hair; its colour is usually that of a mouse; in some individuals darker.

Rice is, perhaps, of their agricultural products, the article upon which the inhabitants of the Philippine Islands most depend for food

and profit; of this they have several different varieties, which the natives distinguish by their size and the shape of the grain: the birnambang, lamuyo, malagequit, bontot-cabayo, dumali, quinanda, bolohan, and tangi. The three first are aquatic; the five latter upland varieties. They each have their peculiar uses. The dumali is the early variety; it ripens in three months from planting, from which circumstance it derives its name: it is raised exclusively on the uplands. Although much esteemed, it is not extensively cultivated, as the birds and insects destroy a large part of the crop.

The malagequit is very much prized, and used for making sweet and fancy dishes; it becomes exceedingly glutinous, for which reason it is used in making whitewash, which it is said to cause to become of a brilliant white, and to withstand the weather. This variety is not, however, believed to be wholesome. There is also a variety of this last species which is used as food for horses, and supposed to be a remedy and preventive against worms.

The rice grounds or fields are laid out in squares, and surrounded by embankments, to retain the water of the rains or streams. After the rains have fallen in sufficient quantities to saturate the ground, a seed-bed is generally planted in one corner of the field, in which the rice is sown broadcast, about the month of June. The heavy rains take place in August, when the fields are ploughed, and are soon filled with water. The young plants are about this time taken from the seed-bed, their tops and roots trimmed, and then planted in the field by making holes in the ground with the fingers and placing four or five sprouts in each of them; in this tedious labour the poor women are employed, whilst the males are lounging in their houses or in the shade of the trees.

The harvest for the aquatic rice begins in December. It is reaped with small sickles, peculiar to the country, called yatap; to the back of these a small stick is fastened, by which they are held, and the stalk is forced upon it and cut. The spikes of rice are cut with this implement, one by one. In this operation, men, women, and children all take part.

The upland rice requires much more care and labour in its cultivation. The land must be ploughed three or four times, and all the turf and lumps well broken up by the harrow.

During its growth it requires to be weeded two or three times, to keep the weeds from choking the crop. The seed is sown broadcast in May. This kind of rice is harvested in November, and to collect the crop is still more tedious than in the other case, for it is always gathered earlier, and never reaped, in consequence of the grain not

adhering to the ear. If it were gathered in any other way, the loss by transportation on the backs of buffaloes and horses, without any covering to the sheaf, would be so great as to dissipate a great portion of the crop.

It appears almost incredible that any people can remain in ignorance of a way of preventing so extravagant and wasteful a mode of harvesting. The government has been requested to prohibit it on account of the great expense it gives rise to; but whether any steps have ever been taken in the matter, I did not learn. It is said that not unfrequently a third part of the crop is lost, in consequence of the scarcity of labourers; while those who are disengaged will refuse to work, unless they receive one-third, and even one-half of the crop, to be delivered free of expense at their houses. This the planters are often obliged to give, or lose the whole crop. Nay, unless the harvest is a good one, reapers are very unwilling to engage to take it even on these terms, and the entire crop is lost. The labourers, during the time of harvest, are supported by the planter, who is during that time exposed to great vexation, if not losses. The reapers are for the most part composed of the idle and vicious part of the population, who go abroad over the country to engage themselves in this employment, which affords a livelihood to the poorer classes; for the different periods at which the varieties of rice are planted and harvested, gives them work during a large portion of the year.

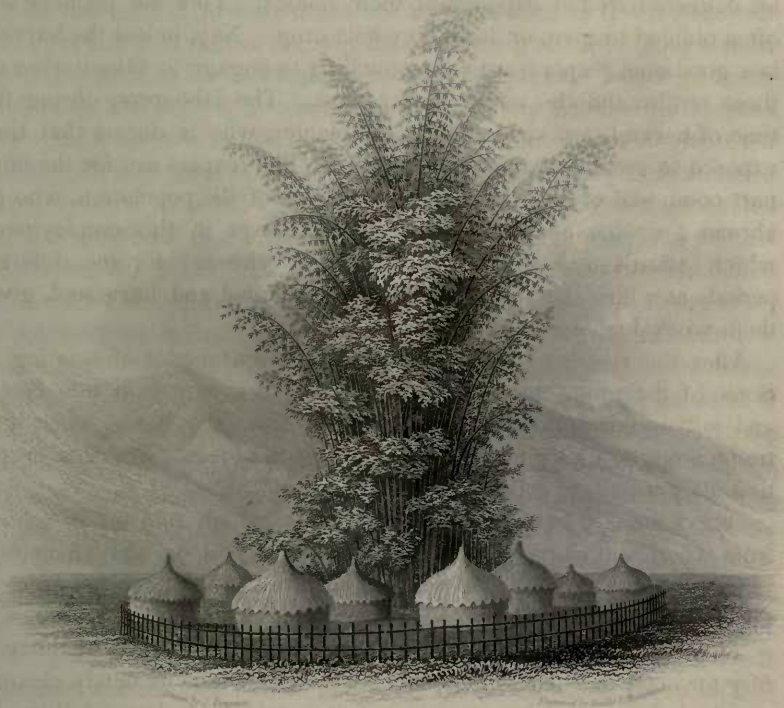
After the rice is harvested, there are different modes of treating it. Some of the proprietors take it home, where it is thrown into heaps, and left until it is desirable to separate it from the straw, when it is trodden out by men and women with their bare feet. For this operation, they usually receive another fifth of the rice.

Others stack it in a wet and green state, which subjects it to heat, from which cause the grain contracts a dark colour, and an unpleasant taste and smell. The natives, however, impute these defects to the wetness of the season.

The crop of both the low and upland rice, is usually from thirty to fifty for one: this is on old land; but on that which is newly cleared, or which has never been cultivated, the yield is far beyond this. In some soils of the latter description, it is said that for a chupa (seven cubic inches) planted, the yield has been a caban. The former is the two-hundred-and-eighth part of the latter. This is not the only advantage gained in planting rich lands, but the saving of labour is equally great; for all that is required is to make a hole with the fingers, and place three or four grains in it. The upland rice requires but little water, and is never irrigated.

The cultivator in the Philippine Islands is always enabled to secure plenty of manure; for vegetation is so luxuriant that by pulling the weeds and laying them with earth, a good stock is quickly obtained with which to cover his fields. Thus, although the growth is so rank as to cause him labour, yet in this hot climate its decay is equally rapid, which tends to make his labours more successful.

The rice-stacks form a picturesque object on the field; they are generally placed around or near a growth of bamboo, whose tall, graceful, and feathery outline is of itself a beautiful object, but connected as it is often seen with the returns of the harvest, it furnishes an additional source of gratification.



STACKING RICE, LUZON.

The different kinds of rice, and especially the upland, would no doubt be an acquisition to our country. At the time we were at Manilla, it was not thought feasible to pack it, for it had just been reaped, and was so green that it would not have kept.* Although

* Since my return home, at the desire of that distinguished agriculturist, Colonel Austin, of South Carolina, I have sent for some samples of the different kinds, and under his care it will no doubt be well treated.

rice is a very prolific crop, yet it is subject to many casualties, from the locusts and other insects that devour it; the drought at other times affects it, particularly the aquatic varieties. There is a use to which the rice is applied here, which was new to us, namely, as a substitute for razors; by using two grains of it between the fingers, they nip the beard, or extract it from the chin and face.

Among the important productions of these islands, I have mentioned hemp, although the article called Manilla hemp must not be understood to be derived from the plant which produces the common hemp (Cannabis), being obtained from a species of plantain (Musa textilis), called in the Philippines "abaca." This is a native of these islands, and was formerly believed to be found only on Mindanao; but this is not the case, for it is cultivated on the south part of Luzon, and all the islands south of it. It grows on high ground, in rich soil, and is propagated by seeds. It resembles the other plants of the tribe of plantains, but its fruit is much smaller, although edible. The fibre is derived from the stem, and the plant attains the height of fifteen or twenty feet. The usual mode of preparing the hemp is to cut off the stem near the ground, before the time or just when the fruit is ripe. The stem is then eight or ten feet long below the leaves, where it is again cut. The outer coating of the herbaceous stem is then stripped off, until the fibres or cellular parts are seen, when it undergoes the process of rotting, and after being well dried in houses and sheds, is prepared for market by assorting it, a task which is performed by the women and children. That which is intended for cloth is soaked for an hour or two in weak lime-water prepared from sea-shells, again dried, and put up in bundles. From all the districts in which it grows, it is sent to Manilla, which is the only port whence it can legally be exported. It arrives in large bundles, and is packed there, by means of a screw-press, in compact bales, for shipping, secured by rattan, each weighing two piculs.

The best Manilla hemp ought to be white, dry, and of a long and fine fibre. This is known at Manilla by the name of lupis; the second quality they call bandala.

The exportation has much increased within the last few years, in consequence of the demand for it in the United States; and the whole crop is now monopolized by the two American houses of Sturges & Co., and T. N. Peale & Co., of Manilla, who buy all of good quality that comes to market. This is divided between the two houses, and the price they pay is from four to five dollars the picul. The entire quantity raised in 1840 was eighty-three thousand seven hundred and ninety piculs; in 1841, eighty-seven thousand.

The quantity exported to the United States in 1840, was sixty-eight

thousand two hundred and eighty piculs, and in 1841, only sixty-two thousand seven hundred piculs; its value in Manilla is about three hundred thousand dollars. Twenty thousand piculs go to Europe. There are no duties on its exportation.

That which is brought to the United States is principally manufactured in or near Boston, and is the cordage known as "white rope." The cordage manufactured at Manilla is, however, very superior to the rope made with us, although the hemp is of the inferior kind. A large quantity is also manufactured into mats.

In the opinion of our botanist, it is not probable that the plant could be introduced with success into our country, for in the Philippines it is not found north of latitude 14° N.

The coffee-plant is well adapted to these islands. A few plants were introduced into the gardens of Manilla, about fifty years ago, since which time it has been spread all over the island, as is supposed by the civet-cats, which, after swallowing the seeds, carry them to a distance before they are voided.

The coffee of commerce is obtained here from the wild plant, and is of an excellent quality. Upwards of three thousand five hundred piculs are now exported, of which one-sixth goes to the United States.

The sugar-cane thrives well here. It is planted after the French fashion, by sticking the piece diagonally into the ground. Some, finding the cane has suffered in times of drought, have adopted other modes. It comes to perfection in a year, and they seldom have two crops from the same piece of land, unless the season is very favourable.

There are many kinds of cane cultivated, but that grown in the valley of Pampanga is thought to be the best. It is a small red variety, from four to five feet high, and not thicker than the thumb. The manufacture of the sugar is rudely conducted; and the whole business, I was told, was in the hands of a few capitalists, who, by making advances, secure the whole crop from those who are employed to bring it to market. It is generally brought in moulds, of the usual conical shape, called pilones, which are delivered to the purchaser from November to June, and contain each about one hundred and fifty pounds. On their receipt, they are placed in large storehouses, where the familiar operation of claying is performed. The estimate for the quantity of sugar from these pilones after this process is about one hundred pounds; it depends upon the care taken in the process.

Of cotton they raise a considerable quantity, which is of a fine quality, and principally of the yellow nankeen. In the province of Ylocos it is cultivated most extensively. The mode of cleaning it of its seed is very rude, by means of a hand-mill, and the expense of

cleaning a picul (one hundred and forty pounds) is from five to seven dollars. There have, as far as I have understood, been no endeavours to introduce any cotton-gins from our country.

It will be merely necessary to give the prices at which labourers are paid, to show how low the compensation is, in comparison with those in our own country. In the vicinity of Manilla, twelve and a half cents per day is the usual wages; this in the provinces falls to six and nine cents. A man with two buffaloes is paid about thirty cents. The amount of labour performed by the latter in a day would be the ploughing of a soane, about two-tenths of an acre. The most profitable way of employing labourers is by the task, when, it is said, the natives work well, and are industrious.

The manner in which the sugar and other produce is brought to market at Manilla is peculiar, and deserves to be mentioned. In some of the villages, the chief men unite to build a vessel, generally a pirogue, in which they embark their produce, under the conduct of a few persons, who go to navigate it, and dispose of the cargo. In due time they make their voyage, and when the accounts are settled, the returns are distributed to each according to his share. Festivities are then held, the saints thanked for their kindness, and blessings invoked for another year. After this is over, the vessel is taken carefully to pieces, and distributed among the owners, to be preserved for the next season.

The profits in the crops, according to estimates, vary from sixty to one hundred per cent.; but it was thought, as a general average, that this was, notwithstanding the great productiveness of the soil, far beyond the usual profits accruing from agricultural operations. In some provinces this estimate would hold good, and probably be exceeded.

Indigo would probably be a lucrative crop, for that raised here is said to be of a quality equal to the best, and the crop is not subject to so many uncertainties as in India: the capital and attention required in vats, &c., prevent it from being raised in any quantities. Among the productions, the bamboo and rattan ought to claim a particular notice from their great utility: they enter into almost every thing. Of the former their houses are built, including frames, floors, sides, and roof; fences are made of the same material, as well as every article of general household use, including baskets for oil and water. The rattan is a general substitute for ropes of all descriptions, and the two combined are used in constructing rafts for crossing ferries.

I have thus given a general outline of the capabilities of this country for agricultural operations, in some of the most important articles of commerce; by which it will be seen that the Philippine Islands are one of the most favoured parts of the globe.

The crops frequently suffer from the ravages of the locusts, which sweep all before them. Fortunately for the poorer classes, their attacks take place after the rice has been harvested; but the cane is sometimes entirely cut off. The authorities of Manilla, in the vain hope of stopping their devastations, employ persons to gather them and throw them into the sea. I understood on one occasion they had spent eighty thousand dollars in this way, but all to little purpose. It is said that the crops rarely suffer from droughts, but on the contrary the rains are thought to fall too often, and to flood the rice fields; these, however, yield a novel crop, and are very advantageous to the poor, viz.: a great quantity of fish, which are called dalag, and are a species of Blunnius; they are so plentiful, that they are caught with baskets: these fish weigh from a half to two pounds, and some are said to be eighteen inches long: but this is not all; they are said, after a deep inundation, to be found even in the vaults of churches.

The Philippines are divided into thirty-one provinces, sixteen of which are on the island of Luzon, and the remainder comprise the other islands of the group and the Ladrones.

The population of the whole group is above three millions, including all tribes of natives, mestizoes, and whites. The latter-named class are but few in number, not exceeding three thousand. The mestizoes were supposed to be about fifteen or twenty thousand; they are distinguished as Spanish and Indian mestizoes. The Chinese have of late years increased to a large number, and it is said that there are forty thousand of them in and around Manilla alone. One-half of the whole population belongs to Luzon. The island next to it in the number of inhabitants is Panay, which contains about three hundred and thirty thousand. Then come Zebu, Mindanoa, Leyte, Samar, and Negros, varying from the above numbers down to fifty thousand. The population is increasing, and it is thought that it doubles itself in seventy years. This rate of increase appears probable, from a comparison of the present population with the estimate made at the beginning of the present century, which shows a growth in the forty years of about one million four hundred thousand.

The native population is composed of a number of distinct tribes, the principal of which in Luzon are Pangarihan, Ylocos, Cagayan, Tagala, and Pampangan.

The Irogotes, who dwell in the mountains, are the only natives who have not been subjected by the Spaniards. The other tribes have become identified with their rulers in religion, and it is thought that by this circumstance alone has Spain been able to maintain the

ascendency with so small a number, over such a numerous, intelligent, and energetic race as they are represented to be. This is, however, more easily accounted for, from the Spaniards fostering and keeping alive the jealousy and hatred that existed at the time of the discovery between the different tribes.

NATIVE OF LUZON.

It seems almost incredible that Spain should have so long persisted in the policy of allowing no more than one galleon to pass annually between her colonies, and equally so that the nations of Europe should have been so long deceived in regard to the riches and wealth that Spain was monopolizing in the Philippines. The capture of Manilla, in 1762, by the English, first gave a clear idea of the value of this remote and little-known appendage of the empire.

The Philippines, considered in their capacity for commerce, are certainly among the most favoured portions of the globe, and there is but one circumstance that tends in the least degree to lessen their apparent advantage; this is the prevalence of typhoons in the China seas, which are occasionally felt with force to the north of latitude 10° N. South of that parallel, they have never been known to prevail, and seldom so far; but from their unfailing occurrence yearly in some part of the China seas, they are looked for with more or less dread, and cause each season a temporary interruption in all the trade that passes along the coast of these islands.

The army is now composed entirely of native troops, who number about six thousand men, and the regiments are never suffered to serve

CALIFORNIA

in the provinces in which they are recruited, but those from the north are sent to the south, and vice versa. There they are employed to keep up a continual watch on each other; and, speaking different dialects, they never become identified.

They are, indeed, never allowed to remain long enough in one region, to imbibe any feelings in unison with those of its inhabitants. The hostility is so great among the regiments, that mutinies have occurred, and contests arisen which have produced even bloodshed, which it was entirely out of the power of the officers to prevent. In cases of this kind, summary punishment is resorted to.

Although the Spaniards, as far as is known abroad, live in peace and quiet, this is far from being the case; for rebellion and revolts among the troops and tribes are not unfrequent in the provinces. During the time of our visit one of these took place, but it was impossible to learn any thing concerning it that could be relied upon, for all conversation respecting such occurrences is interdicted by the government. The difficulty to which I refer was said to have originated from the preaching of a fanatic priest, who inflamed them to such a degree that they overthrew the troops and became temporarily masters of the country. Prompt measures were immediately taken, and orders issued to give the rebels no quarter; the regiments most hostile to those engaged in the revolt were ordered to the spot; they spared no one; the priest and his companions were taken, put to death, and according to report, in a manner so cruel as to be a disgrace to the records of the nineteenth century. Although I should hope the accounts I heard of these transactions were incorrect, yet the detestation these acts were held in, would give some colour to the statements.

The few gazettes that are published at Manilla are entirely under the control of the government; and a resident of that city must make up his mind to remain in ignorance of the things that are passing around him, or believe just what the authorities will allow to be told, whether truth or falsehood. The government of the Philippines is emphatically an iron rule: how long it can continue so, is doubtful.

One of my first duties was to make an official call upon his Excellency Don Marcelino Oroa, who is the sixty-first governor of the Philippine Islands. According to the established etiquette, Mr. Moore, the vice-consul, announced our desire to do so, and requested to be informed of the time when we would be received. This was accordingly named, and at the appointed hour we proceeded to the palace in the city proper. On our arrival, we were announced and led up a flight of steps, ample and spacious, but by no means of such splendour

as would indicate the residence of vice-royalty. The suite of rooms into which we were ushered were so dark that it was difficult to see. I made out, however, that they were panelled, and by no means richly furnished. His excellency entered from a side-door, and led us through two or three apartments into his private audience-room, an apartment not quite so dark as those we had come from: our being conducted to this, I was told afterwards, was to be considered an especial mark of respect to my country. His reception of us was friendly. The governor has much more the appearance of an Irishman than of a Spaniard, being tall, portly, of a florid complexion. He is apparently more than sixty years of age. He was dressed in a full suit of black, with a star on his breast.

Mr. Moore acted as interpreter, and the governor readily acceded to my request to be allowed to send a party into the interior for a few days; a permission which I almost despaired of receiving, for I knew that he had refused a like application some few months before. The refusal, however, I think was in part owing to the character of the applicants, and the doubtful object they had in view. I impute the permission we received to the influence of our consul, together with Mr. Sturges, whose agreeable manners, conciliatory tone, and high standing with the authorities, will, I am satisfied, insure us at all times every reasonable advantage or facility.

The term of the governor in office is three years, and the present incumbent was installed in 1841. This length of time is thought to be sufficient for any one of them to make a fortune. The office is held by the appointment of the ministry in Spain, and with it are connected perquisites that are shared, it is said, by those who confer them.

After having paid our respects to his excellency, we drove to visit several other officers of the government, who received us without ceremony. We generally found them in loose morning-gowns, smoking, and cigars were invariably offered us; for this habit appears in Manilla to extend to all ranks. Even in the public offices of the custom-house it was the fashion, and cigars, with a machero for striking a light, or a jost-stick kept burning, were usually seen in every apartment.

To the captain of the port, Don Juan Salomon, I feel under many obligations for his attentions. I was desirous of obtaining information relative to the Sooloo Seas, and to learn how far the Spanish surveys had been carried. He gave me little hopes of obtaining any; but referred me to Captain Halcon, of the Spanish Navy, who had been employed surveying some part of the coast of the islands to the north. The latter, whom I visited, on my making the inquiry of him, and

stating the course I intended to pursue, frankly told me that all the existing charts were erroneous. He only knew enough of the ground to be certain that they were so, and consequently useless. He advised my taking one of the native pilots, who were generally well acquainted with the seas that lay more immediately in my route. The captain of the port was afterwards kind enough to offer to procure me one.

The intercourse I had with these gentlemen was a source of much gratification, and it gives me great pleasure to make this public expression of it. To both, my sincere acknowledgments are due for information in relation to the various reefs and shoals that have been recently discovered, and which will be found placed in their true position on our charts.

During our stay at Manilla, our time was occupied in seeing sights, shopping, riding, and amusing ourselves with gazing on the throng incessantly passing through the Escolta of the Binondo suburb, or more properly, the commercial town of Manilla.

Among the lions of the place, the great royal cigar manufactories claim especial notice from their extent and the many persons employed. There are two of these establishments, one situated in the Binondo quarter, and the other on the great square or Prado; in the former, which was visited by us, there are two buildings of two stories high, besides several storehouses, enclosed by a wall, with two large gateways, at which sentinels are always posted. The principal workshop is in the second story, which is divided into six apartments, in which eight thousand females are employed. Throughout the whole extent, tables are arranged, about sixteen inches high, ten feet long, and three feet wide, at each of which fifteen women are seated, having small piles of tobacco before them. The tables are set crosswise from the wall, leaving a space in the middle of the room free. The labour of a female produces about two hundred cigars a day; and the working hours are from 6 A. M. till 6 P. M., with a recess of two hours, from eleven till one o'clock. The whole establishment is kept very neat and clean, and every thing appears to be carried on in the most systematic and workmanlike manner. Among such numbers, it has been found necessary to institute a search on their leaving the establishment to prevent embezzlement, and this is regularly made twice a day, without distinction of sex. It is a strange sight to witness the ingress and egress of these hordes of females; and probably the world cannot elsewhere exhibit so large a number of ugly women. Their ages vary from fifteen to forty-five. The sum paid them for wages is very trifling. The whole number of persons em-

ployed in the manufactories is about fifteen thousand; this includes the officers, clerks, overseers, &c.

As nearly as I could ascertain, the revenue derived from these establishments is half a million of dollars.

The natives of the Philippines are industrious. They manufacture an amount of goods sufficent to supply their own wants, particularly from Panay and Ylocos. These for the most part consist of cotton and silks, and a peculiar article called pina. The latter is manufactured from a species of Bromelia (pine-apple), and comes principally from the island of Panay. The finest kinds of pina are exceedingly beautiful, and surpass any other material in its evenness and beauty of texture. Its colour is yellowish, and the embroidery is fully equal to the material. It is much sought after by all strangers, and considered as one of the curiosities of this group. Various reports have been stated of the mode of its manufacture, and among others that it was woven under water, which I found, upon inquiry, to be quite erroneous. The web of the pina is so fine, that they are obliged to prevent all currents of air from passing through the rooms where it is manufactured, for which purpose there are gauze screens in the windows. After the article is brought to Manilla, it is then embroidered by girls; this last operation adds greatly to its value. We visited one of the houses where this was in progress, and where the most skilful workwomen are employed.

On mounting the stairs of bamboos, every step we took produced its creak; but, although the whole seemed but a crazy affair, yet it did not want for strength, being well and firmly bound together. There were two apartments, each about thirteen by twenty-five feet, which could be divided by screens, if required. At the end of it were seen about forty females, all busily plying their needles, and so closely seated as apparently to incommode each other. The mistress of the manufactory, who was quite young, gave us a friendly reception, and showed us the whole process of drawing the threads and working the patterns, which, in many cases, were elegant. A great variety of dresses, scarfs, caps, collars, cuffs, and pocket-handkerchiefs, were shown us. These were mostly in the rough state, and did not strike us with that degree of admiration which was expected. They, however, had been in hand for six months, and were soiled by much handling; but when others were shown us in the finished state, washed and put up, they were such as to claim our admiration.

I was soon attracted by a very different sight at the other end of the apartment. This was a dancing-master and his scholar, of six years old, the daughter of the woman of the house. It was exceedingly amusing to see the airs and graces of this child.

For music they had a guitar; and I never witnessed a ballet that gave me more amusement, or saw a dancer that evinced more grace, ease, confidence, and decided talent, than did this little girl. She was prettily formed, and was exceedingly admired and applauded by us all. Her mother considered her education as finished, and looked on with all the admiration and fondness of parental affection.

On inquiry, I found that the idea of teaching her to read and write had not yet been entertained. Yet every expense is incurred to teach them to use their feet and arms, and to assume the expression of countenance that will enable them to play a part in the after-scenes of life.

This manufactory had work engaged for nine months or a year in advance. The fabric is extremely expensive, and none but the wealthy can afford it. It is also much sought after by foreigners. Even orders for Queen Victoria and many of the English nobility wer then in hand; at least I so heard at Manilla. Those who are actually present have, notwithstanding, the privilege of selecting what they wish to purchase; for, with the inhabitants here, as elsewhere, ready money has too much attraction for them to forego the temptation.

Time in Manilla seems to hang heavily on the hands of some of its inhabitants; their amusements are few, and the climate ill adapted to exertion. The gentlemen of the higher classes pass their morning in the transaction of a little public business, lounging about, smoking, &c. In the afternoon, they sleep, and ride on the Prado; and in the evening, visit their friends, or attend a tertulia. The ladies are to be pitied; for they pass three-fourths of their time in dishabille, with their maids around them, sleeping, dressing, lolling, and combing their hair. In this way the whole morning is lounged away: they neither read, write, nor work. In dress they generally imitate the Europeans, except that they seldom wear stockings, and go with their arms bare. In the afternoon they ride on the Prado in state, and in the evening accompany their husbands. Chocolate is taken early in the morning, breakfast at eleven, and dinner and supper are included in one meal.

Mothers provide for the marriage of their daughters; and I was told that such a thing as a gentleman proposing to any one but the mother, or a young lady engaging herself, is unknown and unheard of. The negotiation is all carried forward by the mother, and the daughter is given to any suitor she may deem a desirable match. The young ladies are said to be equally disinclined to a choice themselves, and if proposals were made to them, the suitor would be at once referred to the mother. Among the lower orders it is no uncommon thing for the parties to be living without the ceremony of marriage, until they

have a family; and no odium whatever is attached to such a connexion. They are looked upon as man and wife, though they do not live together; and they rarely fail to solemnize their union when they have accumulated sufficient property to procure the requisite articles for housekeeping.

Three nights in each week they have music in the plaza, in front of the governor's palace, by the bands of four different regiments, who collect there after the evening parade. Most of the better class resort here, for the pleasure of enjoying it. We went thither to see the people as well as to hear the music. This is the great resort of the *haut ton*, who usually have their carriages in waiting, and promenade in groups backwards and forwards during the time the music is playing. This is by far the best opportunity that one can have for viewing the society of Manilla, which seems as easy and unrestrained as the peculiar gravity and ceremonious mode of intercourse among the old Spaniards can admit. Before the present governor took office, it had been the custom to allow the bands to play on the Prado every fine evening, when all the inhabitants could enjoy it until a late hour; but he has interdicted this practice, and of course given much dissatisfaction; he is said to have done this in a fit of ill temper, and although importuned to restore this amusement to the common people, he pertinaciously refuses.

The bands of the regiments are under the direction of Frenchmen and Spaniards: the musicians are all natives, and play with a correct ear.

Our afternoons were spent in drives on the Prado, where all the fashion and rank of Manilla are to be met, and where it is exceedingly agreeable to partake of the fresh and pure air after a heated day in the city. The extreme end of the Prado lies along the shore of the bay of Manilla, having the roadstead and ships on one side, and the city proper with its fortifications and moats on the other. This drive usually lasts for an hour, and all sorts of vehicles are shown off, from the governor's coach and six, surrounded by his lancers, to the sorry chaise and limping nag. The carriage most used is a four-wheeled biloche, with a gig top, quite low, and drawn by two horses, on one of which is a postilion; these vehicles are exceedingly comfortable for two persons. The horses are small, but spirited, and are said to be able to undergo great fatigue, although their appearance does not promise it. This drive is enlivened by the music of the different regiments, who are at this time to be seen manœuvring on the Prado. The soldiers have a very neat and clean appearance; great attention is paid to them, and the whole are well appointed. The force sta-

tioned in Manilla is six thousand, and the army in the Philippines amounts to twenty thousand men. The officers are all Spaniards, generally the relations and friends of those in the administration of the government. The pay of the soldiers is four dollars a month, and a ration, which is equal to six cents a day. As troops, I was told they acquitted themselves well. The Prado is laid out in many avenues, leading in various directions to the suburbs, and these are planted with wild almond trees, which afford a pleasant shade. It is well kept, and creditable to the city.

In passing the crowds of carriages very little display of female beauty is observed, and although well-dressed above, one cannot but revert to their wearing no stockings beneath.

On the Prado is a small theatre, but so inferior that the building scarce deserves the name: the acting was equally bad. This amusement meets with little encouragement in Manilla, and I was told, was discountenanced by the Governor.

I had the pleasure during our stay of attending a tertulia in the city. The company was not a large one, comprising some thirty or forty ladies and about sixty gentlemen. It resembled those of the mother country. Dancing was introduced at an early hour, and continued till a few minutes before eleven o'clock, at which time the gates of the city are always shut. It was amusing to see the sudden breaking up of the party, most of the guests residing out of the city. The calling for carriages, shawls, hats, &c., produced for a few minutes great confusion, every one being desirous of getting off at the earliest moment possible, for fear of being too late. This regulation, by which the gates are closed at so early an hour, does not appear necessary, and only serves to interrupt the communication between the foreign and Spanish society, as the former is obliged, as before observed, to live outside of the city proper. This want of free intercourse is to be regretted, as it prevents that kind of friendship by which many of their jealousies and prejudices might be removed.

The society at this tertulia was easy, and so far as the enjoyment of dancing went, pleasant; but there was no conversation. The refreshments consisted of a few dulces, lemonade, and strong drinks in an anteroom. The house appeared very spacious and well adapted for entertainments, but only one of the rooms was well lighted. From the novelty of the scene, and the attentions of the gentleman of the house, we passed a pleasant evening.

The natives and mestizoes attracted much of my attention at Manilla. Their dress is peculiar: over a pair of striped trousers of various colours, the men usually wear a fine grass-cloth shirt, a large

straw hat, and around the head or neck a many-coloured silk handkerchief. They often wear slippers as well as shoes. The Chinese dress, as they have done for centuries, in loose white shirts and trousers. One peculiarity of the common men is their passion for cock-fighting; and they carry these fowls wherever they go, after a peculiar fashion under their arm.

Cock-fighting is licensed by the government, and great care is taken in the breeding of game fowls, which are very large and heavy birds. They are armed with a curved double-edged gaff. The exhibitions are usually crowded with half-breeds or mestizoes, who are generally more addicted to gambling than either the higher or lower classes of Spaniards. It would not be an unapt designation to call the middling class cock-fighters, for their whole lives seem to be

MANILLA COSTUMES.

taken up with the breeding and fighting of these birds. On the exit from a cockpit, I was much amused with the mode of giving the return check, which was done by a stamp on the naked arm, and precludes the possibility of its transfer to another person. The dress of the lower order of females is somewhat civilized, yet it bore so strong a resemblance to that of the Polynesians as to recall the latter to our recollection. A long piece of coloured cotton is wound round the body, like the pareu, and tucked in at the side: this covers the

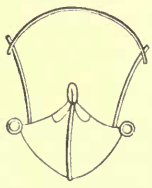
nether limbs; and a jacket fitting close to the body is worn, without a shirt. In some, this jacket is ornamented with work around the neck; it has no collar, and in many cases no sleeves, and over this a richly embroidered cape. The feet are covered with slippers, with wooden soles, which are kept on by the little toe, only four toes entering the slipper, and the little one being on the outside. The effect of both costumes is picturesque.

The market is a never-failing place of amusement to a foreigner, for there a crowd of the common people is always to be seen, and their mode of conducting business may be observed. The canals here afford great facilities for bringing vegetables and produce to market in a fresh state. The vegetables are chiefly brought from the shores of the Laguna de Bay, through the river Pasig. The meat appeared inferior, and as in all Spanish places the art of butchering is not understood. The poultry, however, surpasses that of any other place I have seen, particularly in ducks, the breeding of which is pursued to a great extent. Establishments for breeding these birds are here carried on in a systematic manner, and are a great curiosity. They consist of many small enclosures, each about twenty feet by forty or fifty, made of bamboo, which are placed on the bank of the river, and partly covered with water. In one corner of the enclosure is a small house, where the eggs are hatched by artificial heat, produced by rice-chaff in a state of fermentation. It is not uncommon to see six or eight hundred ducklings all of the same age. There are several hundreds of these enclosures, and the number of ducks of all ages may be computed at millions. The manner in which they are schooled to take exercise, and to go in and out of the water, and to return to their house, almost exceeds belief. The keepers or tenders are of the Tagala tribe, who live near the enclosures, and have them at all times under their eye. The old birds are not suffered to approach the young, and all of one age are kept together. They are fed upon rice and a small species of shell-fish that is found in the river and is peculiar to it. From the extent of these establishments we inferred that ducks were the favourite article of food at Manilla, and the consumption of them must be immense. The markets are well supplied with chickens, pigeons, young partridges, which are brought in alive, and turkeys. Among strange articles that we saw for sale, were cakes of coagulated blood. The markets are well stocked with a variety of fish, taken both in the Laguna and bay of Manilla, affording a supply of both the fresh and salt-water species, and many smaller kinds that are dried and smoked. Vegetables are in great plenty, and consist of pumpkins, lettuce, onions,

radishes, very long squashes, &c.; of fruits, they have melons, chicos, durians, marbolas, and oranges.

Fish are caught in weirs, by the hook, or in seines. The former are constructed of bamboo stakes, in the shallow water of the lake, at the point where it flows through the river Pasig. In the bay, and at the mouth of the river, the fish are taken in nets, suspended by the four corners from hoops attached to a crane, by which they are lowered into the water. The fishing-boats are little better than rafts, and are called saraboas. The wood-cut at the end of this chapter will give a better idea of them.

The usual passage-boat is termed banca, and is made of a single trunk. These are very much used by the inhabitants. They have a sort of awning to protect the passenger from the rays of the sun; and being light are easily rowed about, although they are exceedingly uncomfortable to sit in, from the lowness of the seats, and liable to overset, if the weight is not placed near the bottom. The section and drawing will give a correct idea of them; the out-rigger has in all probability been dispensed with, owing to the impediment it offered to the navigation of their canals; these canals offer great facilities for the transportation of burdens; the banks of almost all of them are faced with granite. Where the streets cross them, there are substantial stone bridges, which are generally of no more than one arch, so as not to impede the navigation. The barges used for the transportation of produce resemble our canal-boats, and have sliding roofs to protect them from the rain.



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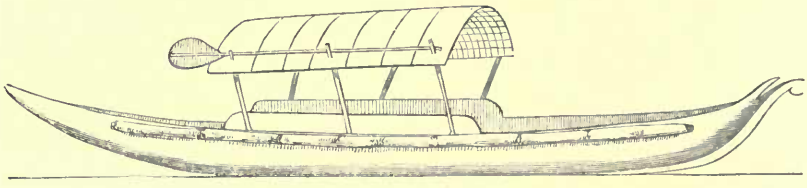


MANILLA BANCA.

Water, for the supply of vessels, is brought off in large earthen jars. It is obtained from the river, and if care is not taken, the water will be impure; it ought to be filled beyond the city. Our supply was obtained five or six miles up the river, by a lighter, in which were placed a number of water-casks. It proved excellent.

The trade of Manilla extends to all parts of the world. A comparative statement of the exports of 1840 and 1841, and the regulations of the trade, will be found in Appendix XII.

There are many facilities for the transaction of business, as far as the shipment of articles is concerned; but great difficulties attend the settling of disputed accounts, collecting debts, &c.; in the way of which the laws passed in 1834 have thrown many obstacles. All commercial business of this kind goes before, first, the Junta de Comercio, and then an appeal to the Tribunal de Comercio. This appeal, however, is merely nominal; for the same judges preside in each, and they are said to be susceptible of influences that render an appeal to them by honest men at all times hazardous. The opinion of those who have had the misfortune to be obliged to recur to these tribunals is, that it is better to suffer wrong than encounter both the expense and vexation of a resort to them for justice. In the first of these courts the decision is long delayed, fees exacted, and other expenses incurred; and when judgment is at length given, it excites one party or the other to appeal: other expenses accrue in consequence, and the advocates and judges grow rich while both the litigants suffer. I understood that these tribunals were intended to simplify business, lessen the time of suits, and promote justice; but these results have not been obtained, and many believe that they have had the contrary effect, and have opened the road to further abuses.

The country around Manilla, though no more than an extended plain for some miles, is one of great interest and beauty, and affords many agreeable rides on the roads to Santa Anna and Maraquino. Most of the country-seats are situated on the river Pasig; they may indeed be called palaces, from their extent and appearance. They are built upon a grand scale, and after the Italian style, with terraces, supported by strong abutments, decked with vases of plants. The grounds are ornamented with the luxuriant, lofty, and graceful trees of the tropics; these are tolerably well kept. Here and there fine large stone churches, with their towers and steeples, are to be seen, the whole giving the impression of a wealthy nobility, and a happy and flourishing peasantry.

In one of our rides we made a visit to the Campo Santo or cemetery, about four miles from Manilla. It is small, but has many handsome trees about it; among them was an Agati, full of large white flowers, showing most conspicuously. The whole place is as unlike a depository of the dead as it well can be. Its form is circular, having a small chapel, in the form of a rotunda, directly opposite the gate, or entrance. The walls are about twenty feet high, with three tiers of niches, in which the bodies are enclosed with quicklime. Here they are allowed to remain for three years, or until such time as the niches may be required for further use. Niches may be purchased, however,

and permanently closed up; but in the whole cemetery there were but five thus secured. This would seem to indicate an indifference on the part of the living, for their departed relatives or friends; at least such was my impression at the time. The centre of the enclosure is laid out as a flower-garden and shrubbery, and all the buildings are washed a deep buff-colour, with white cornices; these colours, when contrasted with the green foliage, give an effect that is not unpleasing. In the chapel are two tombs, the one for the bishop, and the other for the governor. The former, I believe, is occupied, and will continue to be so, until another shall follow him; but the latter is empty, for, since the erection of the cemetery, none of the governors have died. In the rear of the chapel is another small cemetery, called Los Angelos; and, further behind, the Osero. The former is similar to the one in front, but smaller, and appropriated exclusively to children; the latter is an open space, where the bones of all those who have been removed from the niches, after three years, are cast out, and now lie in a confused heap, with portions of flesh and hair adhering to them. No person is allowed to be received here for interment, until the fees are first paid to the priest, however respectable the parties may be; and all those who pay the fees, and are of the true faith, can be interred. I was told of a corpse of a very respectable person being refused admittance, for the want of the priest's pass, to show that the claim had been satisfied, and the coffin stopped in the road until it was obtained. We ourselves witnessed a similar refusal. A servant entered with a dead child, borne on a tray, which he presented to the sacristan to have interred; the latter asked him for the pass, which not being produced, he was dismissed, nor was he suffered to leave his burden until this requisite could be procured from the priest, who lived opposite. The price of interment was three dollars, but whether this included the purchase of the niche, or its rent for three years only, I did not learn.

The churches of Manilla can boast of several fine-toned bells, which are placed in large belfries or towers. There was one of these towers near the Messrs. Sturges', where we stayed; and the manner in which the bell was used, when swung around by the force of two or three men, attracted our attention; for the ringers occasionally practised feats of agility by passing over with the bell, and landing on the coping on the opposite side. The tower being open, we could see the manœuvre from the windows, and, as strangers, went there to look on. One day, whilst at dinner, they began to ring, and as many of the officers had not witnessed the feat, they sought the windows. This excited the vanity of those in the belfry, who redoubled their exertions, and performed the feat successfully many times, although in some in-

stances they narrowly escaped accident, by landing just within the outside coping. This brought us all to the window, and the next turn, more force having been given to the bell, the individual who attempted the feat was thrown headlong beyond the tower, and dashed to pieces on the pavement beneath. Although shocked at the accident, I felt still more so when, after a few minutes, the bell was again heard making its usual sound, as if nothing had occurred to interrupt the course of its hourly peals.

In company with Dr. Tolben, I visited one of the convents where he attended on some of the monks who were sick, and who was well acquainted with them all. I was much struck with the extent of the building, which was four stories high, with spacious corridors and galleries, the walls of which were furnished with pictures representing the martyrdom of the Dominican friars in Japan. These were about seventy in number, in the Chinese style of art, and evidently painted by some one of that nation, calling himself an artist. From appearances, however, I should think they were composed by the priests, who have not a little taxed their invention to find out the different modes in which a man can be put to death. Many evidently, if not all, had been invented for the pictures. So perplexed had they apparently been, that in one of the last it was observed that the executioner held his victim at arms' length by the heels, and was about to let him drop headforemost into a well. From the galleries we passed into the library, and thence into many of the rooms, and finally we mounted to the top of the monastery, which affords a beautiful view of the bay, city, and suburbs. There I was presented to three of the friars, who were pleasant and jolly-looking men. Upon the roof was a kind of observatory, or look-out, simply furnished with billiard-tables and shuffleboards, while the implements for various other games lay about on small tables, with telescopes on stands, and comfortable arm-chairs. It was a place where the friars put aside their religious and austere character or appearance, and sought amusement. It was a delightful spot, so far as coolness and the freshness of the sea air were concerned, and its aspect gave me an insight behind the curtain of these establishments that very soon disclosed many things I was ignorant of before. All the friars were of a rotund form, and many of them bore the marks of good living in their full, red, and bloated faces. It seems to be generally understood at Manilla, that they live upon the fat of the land. We visited several of the rooms, and were warmly greeted by the padres, one of whom presented me with a meteorological table for the previous year.

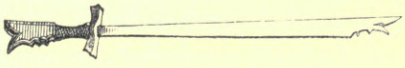
The revenues of all these religious establishments are considerable;

the one I visited belonged to the Dominicans, and was very rich. Their revenues are principally derived from lands owned by them, and the tithes from the different districts which they have under their charge, to which are added many alms and gifts. On inquiry, I found their general character was by no means thought well of, and they had of late years lost much of the influence that they possessed before the revolution in the mother country.

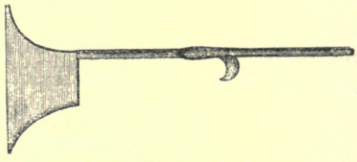
Among the inhabitants we saw here, was a native boy of the Irogotes, or mountain tribe. He is said to be a true Negrito. Mr. Agate obtained a likeness of him, of which the cut is a copy.

NEGRITO BOY.

The Spaniards, as has been stated, have never been able to subdue this tribe, who are said to be still as wild as on their first landing; they are confined almost altogether to the plains within or near the mountains, and from time to time make inroads in great force on the outer settlements, carrying off as much plunder as possible. The burden of this often causes them to be overtaken by the troops. When overtaken, they fight desperately, and were it not for the fire-arms of their adversaries, would give them much trouble. Few are captured on such occasions, and it is exceedingly difficult to take



SWORD.



HATCHET.

them alive, unless when very young. These mountains furnish them with an iron ore almost pure, in manufacturing which they show

much ingenuity. Some of their weapons were presented to the Expedition by Josiah Moore, Esq. These are probably imitations of the early Spanish weapons used against them. From all accounts, the natives are of Malay origin, and allied to those of the other islands of the extensive archipelago of the Eastern Seas; but the population of the towns and cities of the island are so mixed, from the constant intercourse with Chinese, Europeans, and others, that there is no pure blood among them. When at Manilla, we obtained a grammar of the Tagala language, which is said to be now rarely heard, and to have become nearly obsolete. This grammar is believed to be the only one extant, and was procured from a padre, who presented it to the Expedition.

The Pampangans are considered the finest tribe of natives; they are excessively fond of horse-racing, and bet very considerable sums upon it; they have the reputation of being an industrious and energetic set of men.

The mode of raising revenue by a poll-tax causes great discontent among all classes, for although light, it is, as it always has been elsewhere, unpopular. All the Chinese pay a capitation tax of four dollars. The revenue from various sources is said to amount to one million six hundred thousand dollars, of which the poll-tax amounts to more than one-half, the rest being derived from the customs, tobacco, &c. There is no tax upon land. It was thought at Manilla that a revenue might be derived by indirect taxation, far exceeding this sum, without being sensibly felt by the inhabitants. This mode is employed in the eastern islands under the English and Dutch rule, and it is surprising that the Spaniards also do not adopt it, or some other method to increase resources that are so much needed. Whenever the ministry in Spain had to meet a claim, they were a few years ago in the habit of issuing drafts on this colonial government in payment. These came at last in such numbers, that latterly they have been compelled to suspend the payment of them.

The revenue of the colonial government is very little more than will meet the expenses; and it is believed that, notwithstanding these unaccepted claims, it received orders to remit the surplus, if any, to Spain, regardless of honour or good faith.

The government of the Philippines is in the hands of a governor-general, who has the titles of viceroy, commander-in-chief, sub-delegate, judge of the revenue from the post-office, commander of the troops, captain-general, and commander of the naval forces. His duties embrace every thing that relates to the security and defence of the country. As advisers, he has a council called the Audiencia.

The islands are divided into provinces, each of which has a military officer with the title of governor, appointed by the governor-general. They act as chief magistrates, have jurisdiction over all disputes of minor importance, have the command of the troops in time of war, and are collectors of the royal revenues, for the security of which they give bonds, which must be approved of by the comptroller-general of the treasury. The province of Cavite is alone exempt from this rule, and the collection of tribute is there confided to a police magistrate.

Each province is again subdivided into pueblos, containing a greater or less number of inhabitants, each of which has again its ruler, called a gobernadorcillo, who has in like manner other officers under him to act as police magistrates. The number of the latter are very great, each of them having his appropriate duties. These consist in the supervision of the grain fields, cocoa-nut groves, betel-nut plantations, and in the preservation of the general order and peace of the town. So numerous are these petty officers, that there is scarcely a family of any consequence, that has not a member who holds some kind of office under government. This policy, in case of disturbances, at once unites a large and influential body on the side of the government, that is maintained at little expense. The gobernadorcillo exercises the municipal authority, and is especially charged to aid the parish priest in every thing appertaining to religious observances, &c.

In the towns where the descendants of the Chinese are sufficiently numerous, they can, by permission of the governor, elect their own petty governors and officers from among themselves.

In each town there is also a head-man (cabezas de barangay), who has the charge of fifty tributaries, in each of which is included as many families. This division is called a barangay. This office forms by far the most important part of the machinery of government in the Philippine Islands, for these head-men are the attorneys of these small districts, and become the electors of the gobernadorcillos, and other civil officers. Only twelve, however, of them or their substitutes, are allowed to vote in each town.

The office of head-man existed before the conquest of the island, and the Spaniards showed their wisdom in continuing and adapting it to their system of police. The office among the natives was hereditary, but their conquerors made it also elective, and when a vacancy now occurs through want of heirs, or resignation, it is filled up by the superintendent of the province, on the recommendation of the gobernadorcillo and the head-men. This is also the case when any new office is created. The privileges of the head-men are great; themselves, their wives, and their first-born children, are exempted from

paying tribute to the crown, an exoneration which is owing to their being collectors of the royal revenues. Their duties consist in maintaining good order and harmony, in dividing the labour required for the public benefit equally, adjusting differences, and receiving the taxes.

The gobernadorcillo takes cognizance of all civil cases not exceeding two tales of gold, or forty-four dollars in silver; all criminal cases must be sent to the chief of the province. The head-men formerly served for no more than three years, and if this was done faithfully, they became and were designated as principals, in virtue of which rank they received the title of Don.

The election takes place at the court-house of the town; the electors are the gobernadorcillo whose office is about to expire, and twelve of the oldest head-men, collectors of tribute and of "champanes;" for the gobernadorcillo they must select, by a plurality of votes, three individuals, who must be able to speak, read, and write the Spanish language. The voting is done by ballot, in the presence of the notary (escribano), and the chief of the province, who presides. The curate may be present, to look after the interest of the church, but for no other purpose. After the votes are taken, they are sealed and transmitted to the governor-general, who selects one of the three candidates, and issues a commission. In the more distant provinces, the chief of the district has the authority to select the gobernadorcillo, and fill up the commission, a blank form of which, signed by the governor-general, is left with him for that purpose.

The head-men may be elected petty governors, and still retain their office, and collect the tribute or taxes; for it is not considered just, that the important office of chief of Barangay should deprive the holder of the honour of being elected gobernadorcillo.

The greater part of the Chinese reside in the province of Tondo, but the tribute is there collected by the alcalde mayor, with an assistant taken from among the officers of the royal treasury.

The poll-tax on the Chinese amounts to four dollars a head: it was formerly one-half more. Tax-lists of the Chinese are kept, in which they are registered and classified; and opposite the name is the amount at which the individual is assessed.

The Spanish government seems particularly desirous of giving consequence even to its lowest offices; and in order to secure it to them, it is directed that the chiefs of provinces shall treat the gobernadorcillos with respect, offering them seats when they enter their houses or other places, and not allowing them to remain standing; furthermore, the parish curates are required to treat them with equal respect. So far as

concerns the provinces, the government may be called, notwithstanding the officers, courts, &c., monastic. The priests rule, and frequently administer punishment, with their own hands, to either sex, of which an instance will be cited hereafter.

As soon as we could procure the necessary passports, which were obligingly furnished by the governor to "Don Russel Sturges y quatro Anglo Americanos," our party left Manilla for a short jaunt to the mountains. It was considered as a mark of great favour on the part of his excellency to grant this indulgence, particularly as he had a few months prior denied it to a party of French officers. I was told that he preferred to make it a domestic concern, by issuing the passport in the name of a resident, in order that compliance in this case might not give umbrage to the French. It was generally believed that the cause of the refusal in the former instance was the imprudent manner in which the French officers went about taking plans and sketches, at the corners of streets, &c., which in the minds of an unenlightened and ignorant colonial government, of course excited suspicion. Nothing can be so ridiculous as this system of passports; for if one was so disposed, a plan, and the most minute information of every thing that concerns the defences of places, can always be obtained at little cost now-a-days; for such is the skill of engineers, that a plan is easily made of places, merely by a sight of them. We were not, however, disposed to question the propriety of the governor's conduct in the former case, and I felt abundantly obliged to him for a permission that would add to our stock of information.

It was deemed at first impossible for the party to divide, as they had but one passport, and some difficulties were anticipated from the number being double that stated in the passport. The party consisted of Messrs. Sturges, Pickering, Eld, Rich, Dana, and Brackenridge. Mr. Sturges, however, saw no difficulty in dividing the party after they had passed beyond the precincts of the city, taking the precaution, at the same time, not to appear together beyond the number designated on the paper.

On the 14th, they left Manilla, and proceeded in carriages to Santa Anna, on the Pasig, in order to avoid the delay that would ensue if they followed the windings of the river in a banca, and against the current.

At Santa Anna they found their bancas waiting for them, and embarked. Here the scene was rendered animated by numerous boats of all descriptions, from the parao to the small canoe of a single log.

There is a large population that live wholly on the water: for the padrones of the paraos have usually their families with them, which,

from the great variety of ages and sexes, give a very different and much more bustling appearance to the crowd of boats, than would be the case if they only contained those who are employed to navigate them. At times the paraos and bancas, of all sizes, together with the saraboas and pativas (duck establishments), become jumbled together, and create a confusion and noise such as is seldom met with in any other country.

The pativas are under the care of the original inhabitants, to whom exclusively the superintendence of the ducklings seems to be committed. The pens are made of bamboo, and are not over a foot high. The birds were all in admirable order, and made no attempt to escape over the low barrier, although so slight that it was thought by some of our gentlemen it would not have sufficed to confine American ducks, although their wings might have been cut. The mode of giving them exercise was by causing them to run round in a ring. The good understanding existing between the keepers and their charge was striking, particularly when the former were engaged in cleansing the pens, and assisting the current to carry off the impurities. In the course of their sail, it was estimated that hundreds of thousands of ducks of all ages were seen.

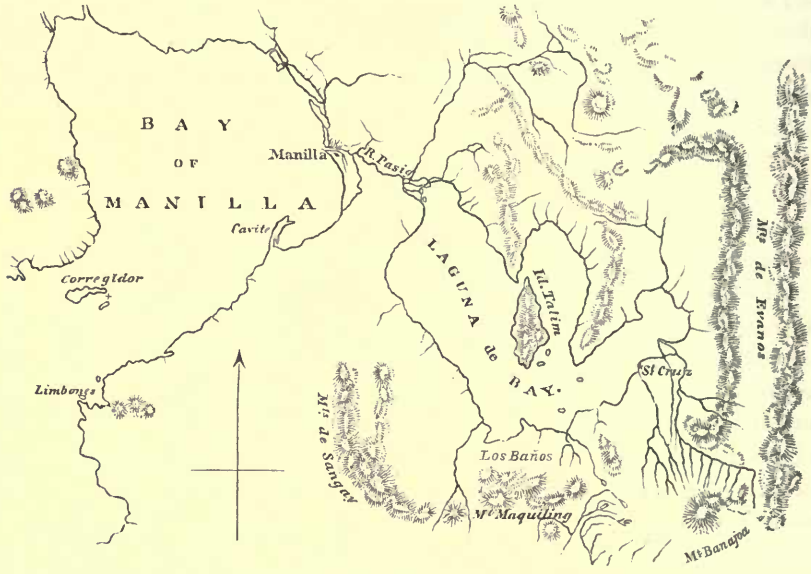
The women who were seen were usually engaged in fishing with a hook and line, and were generally standing in the water, or in canoes. The saraboas were here also in use. The run of the fish is generally concentrated by a chevaux-de-frise to guide them towards the nets and localities where the fishers place themselves.

At five o'clock they reached the Laguna de Bay, where they took in a new crew, with mast and sail. This is called twenty-five miles from Manilla by the river; the distance in a bird's flight is not over twelve. The whole distance is densely peopled, and well cultivated. The crops consist of indigo, rice, &c., with groves of the betel, palm, cocoa-nut, and quantities of fruit trees.

The shores of the lake are shelving, and afford good situations for placing fish-weirs, which are here established on an extensive scale. These weirs are formed of slips of bamboo, and are to be seen running in every direction to the distance of two or three miles. They may be said to invest entirely the shores of the lake for several miles from its outlet, and without a pilot it would be difficult to find the way through them. At night, when heron and tern were seen roosting on the top of each slat, these weirs presented rather a curious spectacle.

The Laguna de Bay is said to be about ten leagues in length by three in width, and trends in a north-northwest and south-southeast

direction: an idea of its shape will be more readily arrived at from the small map of the environs of Manilla which is annexed.



ENVIRONS OF MANILLA.

After dark, the bancas separated. Mr. Sturges, with Dr. Pickering and Mr. Eld, proceeded to visit the mountain of Maijaijai, while Messrs. Rich, Dana, and Brackenridge, went towards the Volcano de Taal. The latter party took the passport, while the former relied upon certain letters of introduction for protection, in case of difficulty.

Mr. Sturges, with his party, directed his course to the east side of the lake, towards a point called Jalujalu, which they reached about three o'clock in the morning, and stopped for the crew to cook some rice, &c. At 8 A. M., they reached Santa Cruz, situated about half a mile up a small streamlet, called Paxanau. At this place they found Don Escudero, to whom they had a letter of introduction, and who holds a civil appointment. They were very kindly received by this gentleman and his brown lady, with their interesting family. He at once ordered horses for them to proceed to the mission of Maijaijai, and entertained them with a sumptuous breakfast.

They were not prepared to set out before noon, until which time they strolled about the town of Santa Cruz, the inhabitants of which are Tagalas. There are only two old Spaniards in the place. The province in which Santa Cruz is situated, contains about five thousand inhabitants, of whom eighteen hundred pay tribute.

The people have the character of being orderly, and govern themselves without the aid of the military. The principal article of culture is the cocoa-nut tree, which is seen in large groves. The trunks of these were notched, as was supposed, for the purpose of climbing them. From the spathe a kind of spirit is manufactured, which is fully as strong as our whiskey.

About noon they left Don Escudero's, and took a road leading to the southward and eastward, through a luxuriant and beautiful country, well cultivated, and ornamented with lofty cocoa-nut trees, betel palms, and banana groves. Several beautiful valleys were passed, with streamlets rushing through them.

Maijaijai is situated about one thousand feet above the Laguna de Bay, but the rise is so gradual that it was almost imperceptible. The country has every where the appearance of being densely peopled; but no more than one village was passed between Santa Cruz and the mission. They had letters to F. Antonio Romana y Aranda, padre of the mission, who received them kindly, and entertained them most hospitably. When he was told of their intention to visit the mountain, he said it was impossible with such weather, pointing to the black clouds that then enveloped its summit; and he endeavoured to persuade the gentlemen to desist from what appeared to him a mad attempt; but finding them resolved to make the trial, he aided in making all the necessary preparations, though he had no belief in their success.

On the morning of the 27th, after mass, Mr. Eld and Dr. Pickering set out, but Mr. Sturges preferred to keep the good padre company until their return. The padre had provided them with guides, horses, twenty natives, and provisions for three days. He had been himself on the same laborious journey, some six months before, and knew its fatigues; although it turned out afterwards that his expedition was performed in fine weather, and that he had been borne on a litter by natives the whole way.

The first part of the road was wet and miry, and discouraging enough. The soil was exceedingly rich, producing tropical plants in great profusion, in the midst of which were seen the neat bamboo cottages, with their industrious and cleanly-looking inhabitants. When they reached the foot of the mountain, they found it was impossible to ride farther, and were obliged to take to walking, which was, however, less of a hardship than riding the little rats of horses, covered with mud and dirt, which were at first deemed useless; but the manner in which they ascended and maintained themselves on the slippery banks, surpassed any thing they had before witnessed in horseflesh. The first part of the ascent of the mountain was gradual, but over a

miry path, which was extremely slippery; and had it not been for the sticks stuck down by the party of the padre in their former ascent, they would have found it extremely difficult to overcome: to make it more disagreeable, it rained all the time.

It took about two hours to reach the steep ascent. The last portion of their route had been through an uninhabited region, with some openings in the woods, affording pasture-grounds to a few small herds of buffalo. In three hours they reached the half-way house, by a very steep and regular ascent. Here the natives insisted upon stopping to cook their breakfast, as they had not yet partaken of any thing through the day. The natives now endeavoured to persuade them it was impracticable to go any farther, or at least to reach the top of the mountain and return before night. Our gentlemen lost their patience at the delay, and after an hour's endurance of it, resolved to set out alone. Six of the natives followed them, and by half-past three they reached the summit, where they found it cold and uncomfortable. The ascent had been difficult, and was principally accomplished by catching hold of shrubs and the roots of trees. The summit is comparatively bare, and not more than fifty feet in width. The side opposite to that by which they mounted was perpendicular, but owing to the thick fog they could not see the depth to which the precipice descended.

The observations with the barometers were speedily taken, which gave the height of Banajoa as six thousand five hundred feet. The trees on the summit were twenty or thirty feet high, and a species of fir was very common. Gaultheria, attached to the trunks of trees, Rhododendrons, and Polygonums, also abounded. The rocks were so covered with soil that it was difficult to ascertain their character; Dr. Pickering is of opinion, however, that they are not volcanic. The house on the summit afforded them little or no shelter; being a mere shed, open on all sides, they found it untenantable, and determined to return as soon as their observations were finished, to the half-way house, which they reached before dark.

The night was passed uncomfortably, and in the morning they made an early start down the mountain to reach the native village at its foot, where they were refreshed with a cup of chocolate, cakes, and some dulces, according to the custom of the country. At ten o'clock they reached the mission, where they were received by the padre and Mr. Sturges. The former was greatly astonished to hear that they had really been to the summit, and had accomplished in twenty-four hours what he had deemed a labour of three days. He quickly attended to their wants, the first among which was dry clothing; and as their baggage had unfortunately been left at Santa Cruz, the wardrobe of

the rotund padre was placed at their disposal. Although the fit was rather uncouth on the spare forms of our gentlemen, yet his clothes served the purpose tolerably well, and were thankfully made use of. During their absence, Mr. Sturges had been much amused with the discipline he had witnessed at the hands of the church, which here seem to be the only visible ruling power. Two young natives had made complaint to the padre that a certain damsel had entered into vows or engagements to marry both: she was accordingly brought up before the padre, Mr. Sturges being present. The padre first lectured her most seriously upon the enormity of her crime, then inflicted several blows on the palm of her outstretched hand, again renewing the lecture, and finally concluding with another whipping. The girl was pretty, and excited the interest of our friend, who looked on with much desire to interfere, and save the damsel from the corporeal punishment, rendered more aggravated by the dispassionate and cool manner in which it and the lecture were administered. In the conversation which ensued, the padre said he had more cases of the violation of the marriage vow, and of infidelity, than any other class of crimes.

After a hearty breakfast, or rather dinner, and expressing their thanks to the padre, they rode back to Santa Cruz, where they arrived at an early hour, and at 9 P. M. they embarked in their bancas for Manilla.

In the morning they found themselves, after a comfortable night, at Baños. Here they took chocolate with the padre, to whom Mr. Sturges had a letter, who informed them that the other party had left the place the evening before for Manilla.

This party had proceeded to the town of Baia, where they arrived at daylight on the 15th. Baia is quite a pretty place, and well situated; the houses are clean and comfortable, and it possessed a venerable stone church, with towers and bells. On inquiring for the padre, they found that he was absent, and it was in consequence impossible for them to procure horses to proceed to the volcano de Taal. They therefore concluded to walk to the hot springs at Baños, about five miles distant. Along the road they collected a number of curious plants. Rice is much cultivated, and fields of it extend to some distance on each side of the road. Buffaloes were seen feeding and wallowing in the ditches.

At Baños the hot springs are numerous, the water issuing from the rock over a considerable surface. The quantity of water discharged by them is large, and the whole is collected and conducted to the bathing-houses. The temperature of the water at the mouth of the culvert was 180°.

The old bath-house is a singular-looking place, being built on the hill-side, in the old Spanish style, with large balconies, that are enclosed in the manner already described, in speaking of the houses in Manilla. It is beautifully situated, and overlooks the baths and lake. The baths are of stone, and consist of two large rooms, in each of which is a niche, through which the hot water passes. This building is now in ruins, the roof and floors having fallen in.

Baños is a small village, but contains a respectable-looking stone church, and two or three houses of the same material. Here the party found a difficulty in getting on, for the alcalde could not speak Spanish, and they were obliged to use an interpreter, in order to communicate with him. Notwithstanding this, he is a magistrate, whose duty it is to administer laws written in that language. Finding they could not succeed even here in procuring guides or horses, they determined to remain and explore Mount Maquiling, the height of which is three thousand four hundred and fifty feet, and in the mean time to send for their bancas.

The next day they set out on their journey to that mountain, and the first part of their path lay over a gentle ascent, through cultivated grounds. Next succeeded an almost perpendicular hill, bare of trees, and overgrown with a tall grass, which it was difficult to pass through.

Such had been the time taken up, that the party found it impossible to reach the summit and return before dark. They therefore began to collect specimens; and after having obtained a full load, they returned late in the afternoon to Baños.

The mountain is composed of trachytic rocks and tufa, which are occasionally seen to break through the rich and deep soil, showing themselves here and there, in the deep valleys which former volcanic action has created, and which have destroyed the regular outline of the cone-shaped mountain. The tufa is generally found to form the gently-sloping plains that surround these mountains, and has in all probability been ejected from them. Small craters, of some two hundred feet in height, are scattered over the plains. The tufa is likewise exposed to view on the shores of the lake; but elsewhere, except on a few bare hills, it is entirely covered with the dense and luxuriant foliage. The tufa is generally of a soft character, crumbling in the fingers, and in it are found coarse and fine fragments of scoria, pumice, &c. The layers are from a few inches to five feet in thickness.

In the country around Baños, there are several volcanic hills, and on the sides of Mount Maquiling are appearances of parasitic cones, similar to those observed at the Hawaiian Islands; but time and the

foliage have so disguised them, that it is difficult to determine exactly their true character.

I regretted exceedingly that the party that set out for the Lake de Taal was not able to reach it, as, from the accounts I had, it must be one of the most interesting portions of the country. It lies nearly south-west from Manilla, and occupies an area of about one hundred and twenty square miles. The Volcano de Taal is situated on an island near the centre of it, and is now in action. The cone which rises from its centre is remarkably regular, and consists for the most part of cinders and scoria. It has been found to be nine hundred feet in elevation above the lake. The crater has a diameter of two miles, and its depth is equal to the elevation: the walls of the crater are nearly perpendicular, so much so that the descent cannot be made without the assistance of ropes. At the bottom there are two small cones. Much steam issues from the many fissures, accompanied by sulphurous acid gas. The waters of the lake are impregnated with sulphur, and there are said to be also large beds of sulphur. In the opinion of those who have visited this spot, the whole lake once formed an immense crater; and this does not appear very improbable, if we are to credit the accounts we received of the many craters on this island that are now filled with water; for instance, in the neighbourhood of San Pablo there are said to be eight or nine.

The hot springs of Baños are numerous, and in their vicinity large quantities of steam are seen to issue from the shore of the lake. There are about a dozen which give out a copious supply of water. The principal one has been enclosed, and made to flow through a stone aqueduct, which discharges a considerable stream. The temperature of the water as it leaves the aqueduct is 178°. The villagers use it for cooking and washing: the signs of the former employment are evident enough from the quantities of feathers from the poultry that have been scalded and plucked preparatory to cooking. The baths are formed by a small circular building six feet in diameter, erected over the point of discharge for the purpose of securing a steam-bath: the temperature of these is 160° and 140°. A change of temperature is said to have occurred in the latter.

The rocks in the vicinity are all tufa, and some of the springs break out close to the cold water of the lake. Near the aqueduct, a stone wall surrounds one of the principal outlets. Two-thirds of the area thus enclosed is occupied by a pond of warm water, and the other third is divided into two stone reservoirs, built for baths. These baths had at one time a high reputation, and were a very fashionable resort for the society of Manilla; but their celebrity gradually diminished, and the

whole premises have gone out of repair, and are fast falling to ruin.

The water of the springs has no perceptible taste, and only a very faint smell of sulphur is perceived. No gas escapes from it, but a white incrustation covers the stones over which the water flows.

Some of these waters were obtained, and since our return were put into the hands of Dr. C. T. Jackson, of Boston, who gives the following analysis:

Specific gravity, 1·0043; thermometer 60°; barometer 30·05 in.

A quantity of the water, equal in bulk to three thousand grains of distilled water, on evaporation gave—

Dry salts, 5·95 grains.

A quantity of the water, equal in bulk to one thousand grains of distilled water, was operated on for each of the following ingredients:

Chlorine,	0·66
Carbonic acid,	0·16
Sulphuric acid,	0·03
Soda and sodium,	0.97
Magnesia,	0·09
Lime,	0·07
Potash,	traces
Organic matter,	"
Manganese,	"
	1·98

On Mount Maquiling, wild buffaloes, hogs, a small species of deer, and monkeys, are found. Birds are also very numerous, and among them is the horn-bill: the noise made by this bird resembles a loud barking; report speaks of them as an excellent bird for the table. Our gentlemen reached their lodging-place as the night closed in, and the next day again embarked for Manilla, regretting that time would not permit them to make another visit to so interesting a field of research. They found the lake so rough that they were compelled to return, and remain until eight o'clock. This, however, gave our botanists another opportunity of making collections, among which were beautiful specimens of Volkameria splendens, with elegant scarlet flowers, and a Brugmansia, which expanded its beautiful silvery flowers after sunset. On the shores a number of birds were feeding, including pelicans, with their huge bills, the diver, with its long arched neck, herons, gulls, eagles, and snow-white cranes, with ducks and other small aquatic flocks. Towards night these were joined by large bats, that were

seen winging their way towards the plantations of fruit. These, with quantities of insects, gave a vivid idea of the wonderful myriads of animated things that are constantly brought into being in these tropical and luxuriant climates.

Sailing all night in a rough sea, they were much incommoded by the water, which was shipped into the banca which kept them constantly baling out; they reached the river Pasig at daylight, and again passed the duck establishments, and the numerous boats and bancas on their way to the markets of Manilla.

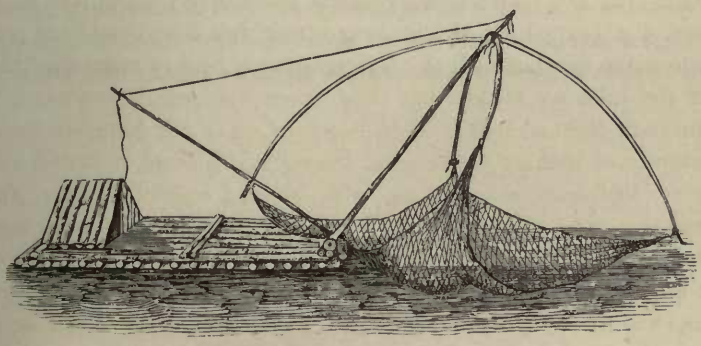
Both the parties reached the consul's the same day, highly pleased with their respective jaunts. To the kindness of Messrs. Sturges and Moore, we are mainly indebted for the advantages and pleasures derived from the excursions.

The instruments were now embarked, and preparations made for going to sea. Our stay at Manilla had added much to our collections; we obtained many new specimens, and the officers and naturalists had been constantly and profitably occupied in their various duties.

We went on board on the 20th of January, and were accompanied to the vessel by Messrs. Sturges and Moore, with several other residents of Manilla.

We had, through the kindness of Captain Salomon, procured a native pilot for the Sooloo Sea, who was also to act as interpreter.

On the morning of the 21st, we took leave of our friends, and got under way. The same day, and before we had cleared the bay, we spoke the American ship Angier, which had performed the voyage from the United States in one hundred and twenty-four days, and furnished us with late and interesting news. We then, with a strong northerly wind, made all sail to the south for the Straits of Mindoro.



MANILLA SARABOA.

CHAPTER IX.

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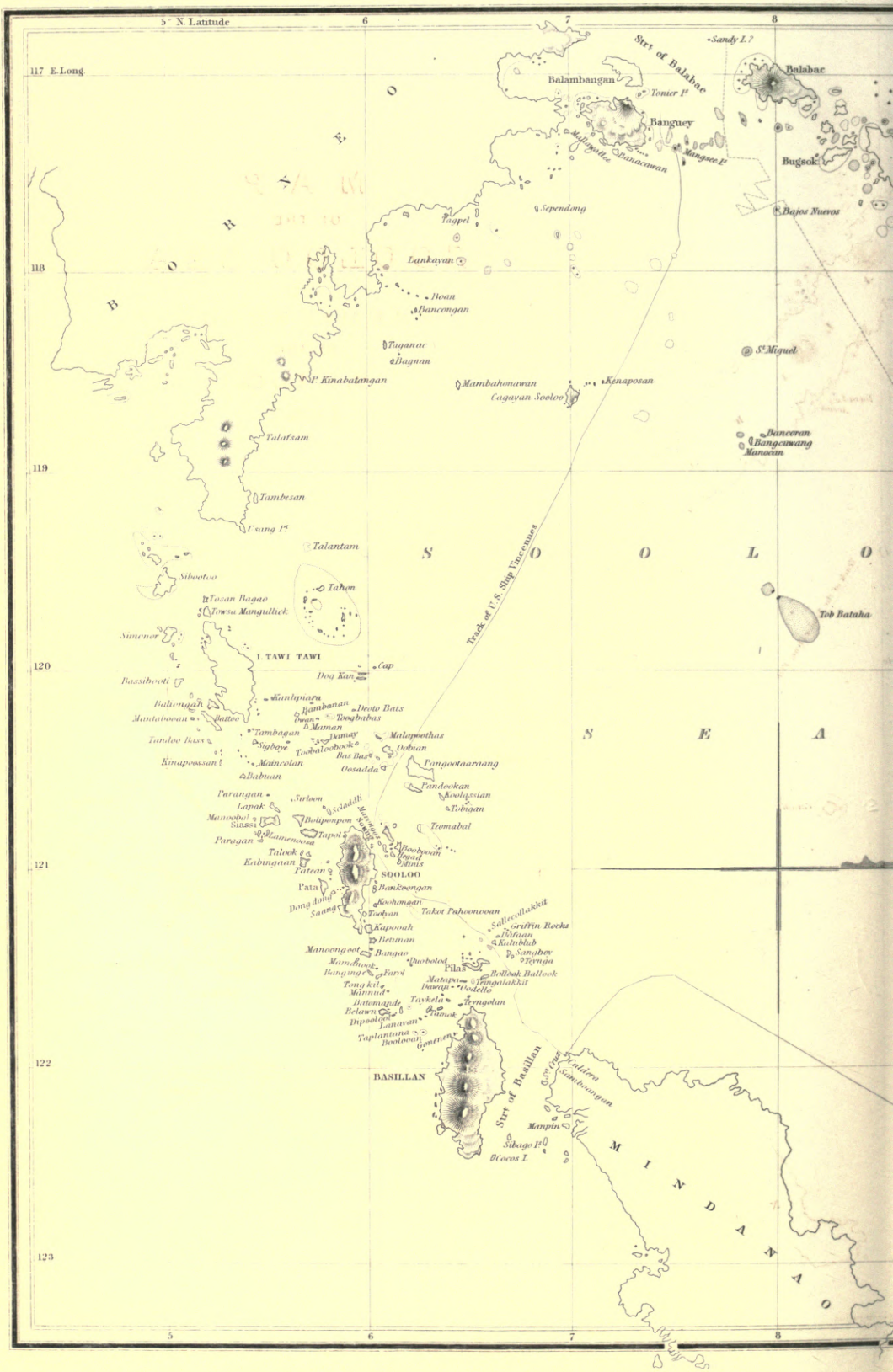

5° N. Latitude
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7
8
117 E. Long.
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120
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B O R N E O
S O O L O
S E A
M I N D A N A O
Strt of Balabac
Sandy I.?
Balabac
Balambangan
Tonier Is
Banguey
Mallawallee
Banacawan
Mangsee Is
Bugsok
Bajos Nuevos
Sependong
Tagpel
Lankayan
Boan
Bancongan
Taganac
Bagnan
St Miguel
P. Kinabatangan
Mambahonawan
Kenaposan
Cagayan Sooloo
Talafsam
Bancoran
Bangcuwang
Manocan
Tambesan
Usang Is
Talantam
Sibootoo
Tahon
Tosan Bagao
Towsa Mangullick
Simonor
I. TAWI TAWI
Cap
Dog Kan
Bassibooti
Kanlipiara
Bambanan
Deoto Bats
Mantabooan
Battoo
Owan
Toogbabas
Maman
Tambagan
Damay
Malapoothas
Tandoo Bass
Sigboye
Toobaloobook
Oobian
Kinapoossan
Maincolan
Bas Bas
Oosadda
Pangootaaraang
Babuan
Pandookan
Parangan
Sirloon
Koolassian
Lapak
Soladdli
Tobigan
Manoobal
Siassi
Boliponpon
Teomabal
Paragan
Lamenoosa
Tapol
Talook
Booboogan
Kabingaan
Pegad
Minis
Patean
SOOLOO
Pata
Bankoongan
Dong dong
Koohongan
Saang
Toolyan
Takot Pahoonooan
Sallecollakkit
Griffin Rocks
Kapooah
Dafaan
Kalublub
Betunan
Manoongoot
Bangao
Sangboy
Mamanook
Quobolod
Teynga
Pilas
Banging
Farol
Bollook Ballook
Tongkil
Matapa
Teingalakkit
Mannud
Dawan
Oodello
Batomande
Taykela
Teyngolan
Belawn
Tamok
Dipoolool
Lanavan
Taplantana
Booloean
Gonenen
BASILLAN
Strt of Basillan
Caldera
Sambuangan
Manpin
Sibago Is
Cocos I.
Track of U.S. Ship Vincennes
Tob Bataha

MAP
OF THE
SOOLOO SEA
AND
ARCHIPELAGO
BY THE
U. S. Ex. Ex.
1842
E. Lon. fr. Greenwich.
9
10
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12
13
117
118
119
120
121
122
123
Basa I.
Arena
Aspera
Brenas Is
Verdes Is
North Cape
Track of the Trades Flying Fish
Yloe
Linacapan
Dumaran
Busvagan
Herald Isl
Cararing
Carandaga
Coron
Str of Mindoro
Apo Shoal
Cavalli
Manamoc
C U Y O
I S L E S
Caluja
Piedra Blanca
Quinibuban
Ambolon
Isl
Shoal
M I N D O R O
Cuyo
Cagayanes Is
Sombrero
Paguayan
Cambden Shoal
Semarara
Tubagao
Caluhia
Influenza
Golconda
Banco Seco
Sombrero
Is Luegos
Antique or St Jose
Bagbatan
Pt Nasog
Carabao
Tablas
P A N A Y
N E G R O S
os or Siguijos
Engraved by Edwd Yeager Philada

CHAPTER IX.

SOOLOO.

1842.

On the evening of the 21st of January, the Vincennes, with the tender in company, left the bay of Manilla. I then sent for Mr. Knox, who commanded the latter, and gave him directions to keep closely in company with the Vincennes, and at the same time pointed out to him places of rendezvous where the vessels might again meet in case any unavoidable circumstance caused their separation. I was more particular in giving him instructions to avoid losing sight of the Vincennes, as I was aware that my proposed surveys might be impeded or frustrated altogether, were I deprived of the assistance of the vessel under his command.

On the 22d, we passed the entrance of the Straits of San Bernadino. It would have been my most direct route to follow these straits until I had passed Mindoro, and it is I am satisfied the safest course, unless the winds are fair, for the direct passage. My object, however, was to examine the ground for the benefit of others, and the Apo Shoal, which lies about mid-channel between Palawan and Mindoro, claimed my first attention. The tender was despatched to survey it, while I proceeded in the Vincennes to examine the more immediate entrance to the Sooloo Sea, off the southwest end of Mindoro.

Calavite Peak is the north point of Mindoro, and our observations made it two thousand feet high. This peak is of the shape of a dome, and appears remarkably regular when seen from its western side. On approaching Mindoro, we, as is usual, under high islands, lost the steady breeze, and the wind became light for the rest of the day. Mindoro is a beautiful island, and is evidently volcanic; it appears as

if thrown up in confused masses: it is not much settled, as the more southern islands are preferred to it as a residence.

On the 23d, we ascertained the elevation of the highest peak of the island by triangulation to be three thousand one hundred and twenty-six feet. The easternmost island of the Palawan Group, Busvagan, was at the time just in sight from the deck, to the southwest.

It had been my intention to anchor at Ambolou Island; but the wind died away before we reached it, and I determined to stand off and on all night.

On the 24th, I began to experience the truth of what Captain Halcon had asserted, namely, that the existing charts were entirely worthless, and I also found that my native pilot was of no more value than they were: he had evidently passed the place before; but whether the size of the vessel, so much greater than any he had sailed in, confused him, or whether it was from his inability to understand and to make himself understood by us, he was of no use whatever, and we had the misfortune of running into shoal water, barely escaping the bottom. These dangers were usually quickly passed, and we soon found ourselves again floating in thirty or forty fathoms water.

We continued beating to windward, in hopes of being joined by the Flying-Fish, and I resolved to finish the survey towards the island of Semarara. We found every thing in a different position from that assigned it by any of the charts with which we were furnished. On this subject, however, I shall not dwell, but refer those who desire particular information to the charts and Hydrographical Memoir.

Towards evening, I again ran down to the southwest point of the island of Mindoro, and sent a letter on shore to the pueblo, with directions to have it put on board the tender, when she should arrive. We then began to beat round Semarara, in order to pass over towards Panay.

The southern part of Mindoro is much higher than the northern, but appears to be equally rough. It is, however, susceptible of cultivation, and there are many villages along its shores.

Semarara is moderately high, and about fifteen miles in circumference; it is inhabited, and like Mindoro much wooded. According to the native pilot, its shores are free from shoals. It was not until the next day that we succeeded in reaching Panay. I determined to pass the night off Point Potol, the north end of Panay, as I believed the sea in its neighbourhood to be free of shoals, and wished to resume our running survey early in the morning.

At daylight on the 27th we continued the survey down the coast of Panay, and succeeded in correcting many errors in the existing charts

(both English and Spanish). The channel along this side is from twelve to twenty miles wide, and suitable for beating in; little current is believed to exist; and the tides, as far as our observations went, seem to be regular and of little strength.

The island of Panay is high and broken, particularly on the south end; its shores are thickly settled and well cultivated. Indigo and sugar-cane claim much of the attention of the inhabitants. The Indians are the principal cultivators. They pay to government a capitation tax of seven rials. Its population is estimated at three hundred thousand, which I think is rather short of the actual number.

On all the hills there are telegraphs of rude construction, to give information of the approach of piratical prahus from Sooloo, which formerly were in the habit of making attacks upon the defenceless inhabitants and carrying them off into slavery. Of late years they have ceased these depredations, for the Spaniards have resorted to a new mode of warfare. Instead of pursuing and punishing the offenders, they now intercept all their supplies, both of necessaries and luxuries; and the fear of this has had the effect to deter pirates from their usual attacks.

We remained off San Pedro for the night, in hopes of falling in with the Flying-Fish in the morning.

On the morning of the 28th, the Flying-Fish was discovered plainly in sight. I immediately stood for her, fired a gun and made signal. At seven o'clock, another gun was fired, but the vessel still stood off, and was seen to make sail to the westward without paying any regard whatever to either, and being favoured by a breeze while the Vincennes was becalmed, she stole off and was soon out of sight.*

After breakfast we opened the bay of Antique, on which is situated the town of San José. As this bay apparently offered anchorage for vessels bound up this coast, I determined to survey it; and for this purpose the boats were hoisted out and prepared for surveying. Lieutenant Budd was despatched to visit the pueblo called San José.

On reaching the bay, the boats were sent to different points of it, and when they were in station, the ship fired guns to furnish bases by the sound, and angles were simultaneously measured. The boats made soundings on their return to the ship, and thus completed this duty, so that in an hour or two afterwards the bay was correctly represented on paper. It offers no more than a temporary anchorage

* On my arrival at Singapore, this circumstance was investigated by a court of inquiry. The result showed that Mr. Knox had no knowledge of the Vincennes having been seen; for the officer of the watch had not reported to him the fact.

for vessels, and unless the shore is closely approached, the water is almost too deep for the purpose.

At San José a Spanish governor resides, who presides over the two pueblos of San Pedro and San José, and does the duty also of alcalde. Lieutenant Budd did not see him, as he was absent, but his lady did the honours. Lieutenant Budd represented the pueblo as cleanly and orderly. About fifteen soldiers were seen, who compose the governor's guard, and more were said to be stationed at San Pedro. A small fort of eight guns commands the roadstead. The beach was found to be of fine volcanic sand, composed chiefly of oxide of iron, and comminuted shells; there is here also a narrow shore reef of coral. The plain bordering the sea is covered with a dense growth of cocoa-nut trees. In the fine season the bay is secure, but we were informed that in westerly and southwesterly gales heavy seas set in, and vessels are not able to lie at anchor. Several small vessels were lying in a small river about one and a half miles to the southward of the point on which the fort is situated. The entrance to this river is very narrow and tortuous.

Panay is one of the largest islands of the group. We had an opportunity of measuring the height of some of its western peaks or highlands, none of which exceed three thousand feet. The interior and eastern side have many lofty summits, which are said to reach an altitude of seven thousand five hundred feet; but these, as we passed, were enveloped in clouds, or shut out from view by the nearer highlands. The general features of the island are like those of Luzon and Mindoro. The few specimens we obtained of its rocks consisted of the different varieties of talcose formation, with quartz and jasper. The specimens were of no great value, as they were much worn by lying on the beach.

The higher land was bare of trees, and had it not been for the numerous fertile valleys lying between the sharp and rugged spurs, it would have had a sterile appearance.

The bay of Antique is in latitude 10° 40′ N., longitude 121° 59′ 30″ E.

It was my intention to remain for two or three days at a convenient anchorage to enable us to make short excursions into the interior; but the vexatious mismanagement of the tender now made it incumbent that I should make every possible use of the time to complete the operations connected with the hydrography of this sea; for I perceived that the duties which I intended should be performed by her, would now devolve upon the boats, and necessarily expose both officers and men to the hazard of contracting disease. I regretted giving up this

design, not only on my own account and that of the Expedition, but because of the gratification it would have afforded personally to the naturalists.

The town of San José has about thirty bamboo houses, some of which are filled in with clay or mortar, and plastered over, both inside and out. Few of them are more than a single story in height. That of the governor is of the same material, and overtops the rest; it is whitewashed, and has a neat and cleanly appearance. In the vicinity of the town are several beautiful valleys, which run into the mountains from the plain that borders the bay. The landing is on a bamboo bridge, which has been erected over an extensive mud-flat, that is exposed at low water, and prevents any nearer approach of boats. This bridge is about seven hundred feet in length; and a novel plan has been adopted to preserve it from being carried away. The stems of bamboo not being sufficiently large and heavy to maintain the superstructure in the soft mud, a scaffold is constructed just under the top, which is loaded with blocks of large stone, and the outer piles are secured to anchors or rocks, with grass rope. The roadway or top is ten feet wide, covered with split bamboo, woven together, and has rails on each side, to assist the passenger. This is absolutely necessary for safety; and even with this aid, one unaccustomed to it must be possessed of no little bodily strength to pass over this smooth, slippery, and springy bridge, without accident.

Two pirogues were at anchor in the bay, and on the shore was the frame of a vessel which had evidently been a long while on the stocks, for the weeds and bushes near the keel were six or eight feet high, and a portion of the timbers were decayed. Carts and sleds drawn by buffaloes were in use, and every thing gave it the appearance of a thriving village. Although I have mentioned the presence of soldiers, it was observed on landing that no guard was stationed about or even at the fort; but shortly afterwards a soldier was seen hurrying towards the latter, in the act of dressing himself in his regimentals, and another running by his side, with his cartridge-box and musket. In a little while one was passing up and down on his post, as though he was as permanent there as the fort itself.

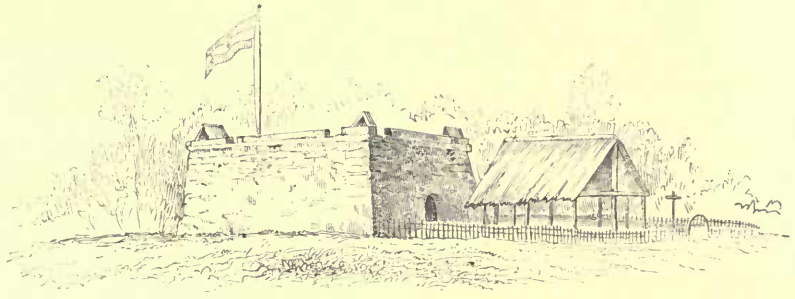
After completing these duties, the light airs detained us the remainder of the day under Panay, in sight of the bay. On the 29th, at noon, we had been wafted by it far enough in the offing to obtain the easterly breeze, which soon became strong, with an overcast sky, and carried us rapidly on our course; my time would not permit my heaving-to. We kept on our course for Mindanao during the whole

night, and were constantly engaged in sounding, with our patent lead, with from thirty to forty fathoms cast, to prevent our passing over this part of the sea entirely unexamined.

At daylight on the 31st, we had the island of Mindanao before us, but did not reach its western cape until 5 P. M. This island is high and broken, like those to the north of it, but, unlike them, its mountains are covered with forests to their very tops, and there were no distinct cones of minor dimensions, as we had observed on the others. If they do exist, they were hidden by the dense forest.

I had determined to anchor at Caldera, a small port on the south-west side of Mindanao, about ten miles distant from Samboangan, where the governor resides. The latter is a considerable place, but the anchorage in its roadstead is said to be bad, and the currents that run through the Straits of Basillan are represented to be strong. Caldera, on the other hand, has a good, though small anchorage, which is free from the currents of the straits. It is therefore an excellent stopping-place, in case of the tide proving unfavourable. On one of its points stands a small fort, which, on our arrival, hoisted Spanish colours.

At six o'clock we came to anchor at Caldera, in seven fathoms water. There were few indications of inhabitants, except at and near the fort. An officer was despatched to the fort, to report the ship. It was found to be occupied by a few soldiers under the command of a lieutenant.



FORT AT CALDERA.

The fort is about seventy feet square, and is built of large blocks of red coral, which evidently have not been taken from the vicinity of the place, as was stated by the officers of the fort; for, although our parties wandered along the alluvial beach for two or three miles in each direction, no signs of coral were observed. Many fragments of red, gray, and purple basalt and porphyry were met with along the beach; talcose rock and slate, syenite, hornblend, quartz, both com-

pact and slaty, with chalcedony, were found in pieces and large pebbles. Those who were engaged in dredging reported the bottom as being of coral, in from four to six or eight fathoms; but this was of a different kind from that of which the fort was constructed.

The fort was built in the year 1784, principally for protection against the Sooloo pirates, who were in the habit of visiting the settlements, and carrying off the inhabitants as slaves, to obtain ransom for them. This, and others of the same description, were therefore constructed as places of refuge for the inhabitants, as well as to afford protection to vessels.

Depredations are still committed, which render it necessary to keep up a small force. One or two huts which were seen in the neighbourhood of the bay, are built on posts twenty feet from the ground, and into them they ascend by ladders, which are hauled up after the occupants have entered.

These, it is said, are the sleeping-huts, and are so built for the purpose of preventing surprise at night. Before our arrival we had heard that the villages were all so constructed, but a visit to one soon showed that this was untrue. The natives seen at the village were thought to be of a decidedly lighter colour and a somewhat different expression from the Malays. They were found to be very civil, and more polished in manners than our gentlemen expected. On asking for a drink of water, it was brought in a glass tumbler on a china plate. An old woman, to whom they had presented some trifles, took the trouble to meet them in another path on their return, and insisted on their accepting a basket of potatoes. Some of the houses contained several families, and many of them had no other means of entrance than a notched post stuck up to the door.

The forests of Mindanao contain a great variety of trees, some of which are of large size, rising to the height of one hundred and one hundred and fifty feet. Some of their trunks are shaped like buttresses, similar to those before spoken of at Manilla, from which they obtain broad slabs for the tops of tables. The trunks were observed to shoot up remarkably straight. Our botanical gentlemen, though pleased with the excursion, were disappointed at not being able to procure specimens from the lofty trees; and the day was less productive in this respect than they had anticipated. Large woody vines were common, which enveloped the trunks of trees in their folds, and ascending to their tops, prevented the collection of the most desirable specimens.

The paths leading to the interior were narrow and much obstructed: one fine stream was crossed. Many buffaloes were observed wal-

lowing in the mire, and the woods swarmed with monkeys and numbers of birds, among them the horn-bills: these kept up a continued chatter, and made a variety of loud noises. The forests here are entirely different from any we had seen elsewhere; and the stories of their being the abode of large boas and poisonous snakes, make the effect still greater on those who visit them for the first time. Our parties, however, saw nothing of these reptiles, nor any thing to warrant a belief that such exist. Yet the officer at the fort related to me many snake stories that seemed to have some foundation; and by inquiries made elsewhere, I learned that they were at least warranted by some facts, though probably not to the extent that he represented.

Traces of deer and wild hogs were seen, and many birds were obtained, as well as land and sea shells. Among the latter was the Malleus vulgaris, which is used as food by the natives. The soil on this part of the island is a stiff clay, and the plants it produces are mostly woody; those of an herbaceous character were scarce, and only a few orchideous epiphytes and ferns were seen. Around the dwellings in the villages were a variety of vegetables and fruits, consisting of sugar-cane, sweet-potato, gourds, pumpkins, peppers, rice, water and musk melons, all fine and of large size.

The officer at the fort was a lieutenant of infantry; one of that rank is stationed here for a month, after which he, with the garrison, consisting of three soldiers, are relieved, from Samboangan, where the Spaniards have three companies.

Samboangan is a convict settlement, to which the native rogues, principally thieves, are sent. The Spanish criminals, as I have before stated in speaking of Manilla, are sent to Spain.

The inhabitants of the island of Mindanao who are under the subjection of Spain, are about ten thousand in number, of whom five or six thousand are at or in the neighbourhood of Samboangan. The original inhabitants, who dwell in the mountains and on the east coast, are said to be quite black, and are represented to be a very cruel and bad set; they have hitherto bid defiance to all attempts to subjugate them. When the Spaniards make excursions into the interior, which is seldom, they always go in large parties on account of the wild beasts, serpents, and hostile natives; nevertheless, the latter frequently attack and drive them back.

The little fort is considered as a sufficient protection for the fishermen and small vessels against the pirates, who inhabit the island of Basillan, which is in sight from Mindanao, and forms the southern side of the straits of the same name. It is said that about seven

hundred inhabit it. The name of Moor is given by the Spaniards to all those who profess the Mohammedan religion, and by such all the islands to the west of Mindanao, and known under the name of the Sooloo Archipelago, are inhabited.

The day we spent at Caldera was employed in surveying the bay, and in obtaining observations for its geographical position, and for magnetism. The flood tide sets to the northward and westward, through the straits, and the ebb to the eastward. In the bay we found it to run two miles an hour by the log, but it must be much more rapid in the straits.

At daylight on the 1st of February, we got under way to stand over for the Sangboys, a small island with two sharp hills on it. One and a half miles from the bay we passed over a bank, the least water on which was ten fathoms on a sandy bottom, and on which a vessel might anchor. The wind shortly after failed us, and we drifted with the tide for some hours, in full view of the island of Mindanao, which is bold and picturesque. We had thus a good opportunity of measuring some of its mountain ranges, which we made about three thousand feet high.

In the afternoon, a light breeze came from the southwest, and before sunset I found that we were again on soundings. As soon as we had a cast of twenty fathoms, I anchored for the night, judging it much better than to be drifting about without any knowledge of the locality and currents to which we were subjected.

On the morning of the 2d, we got under way to proceed to the westward. As the bottom was unequal, I determined to pass through the broadest channel, although it had the appearance of being the shoalest, and sent two boats ahead to sound. In this way we passed through, continuing our surveying operations, and at the same time made an attempt to dredge; but the ground was too uneven for the latter purpose, and little of value was obtained.

Shortly after passing the Sangboys, we had the island of Sooloo in sight, for which I now steered direct. At sunset we found ourselves within five or six miles of Soung Harbour; but there was not sufficient light to risk the dangers that might be in our course, nor wind enough to command the ship; and having no bottom where we were, I determined again to run out to sea, and anchor on the first bank I should meet. At half-past eight o'clock, we struck sounding in twenty-six fathoms, and anchored.

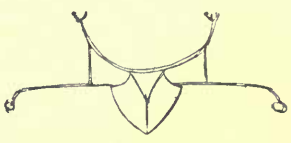
At daylight we determined our position by angles, and found it to correspond with part of the route we had passed over the day before, and that we were about fifteen miles from the large island of Sooloo.

Weighing anchor, we were shortly wafted by the westerly tide and a light air towards that beautiful island, which lay in the midst of its little archipelago; and as we were brought nearer and nearer, we came to the conclusion that in our many wanderings we had seen nothing to be compared to this enchanting spot. It appeared to be well cultivated, with gentle slopes rising here and there into eminences from one to two thousand feet high. One or two of these might be dignified with the name of mountains, and were sufficiently high to arrest the passing clouds; on the afternoon of our arrival we had a singular example in the dissipation of a thunder-storm.

Although much of the island was under cultivation, yet it had all the freshness of a forest region. The many smokes on the hills, buildings of large size, cottages, and cultivated spots, together with the moving crowds on the land, the prahus, canoes, and fishing-boats on the water, gave the whole a civilized appearance. Our own vessel lay, almost without a ripple at her side, on the glassy surface of the sea, carried onwards to our destined anchorage by the flowing tide, and scarce a sound was heard except the splashing of the lead as it sought the bottom. The effect of this was destroyed in part by the knowledge that this beautiful archipelago was the abode of a cruel and barbarous race of pirates. Towards sunset we had nearly reached the bay of Soung, when we were met by the opposing tide, which frustrated all our endeavours to reach it, and I was compelled to anchor, lest we should again be swept to sea.

As soon as the night set in, fishermen's lights were seen moving along the beach in all directions, and gliding about in canoes, while the sea was filled with myriads of phosphorescent animalculæ. After watching this scene for two or three hours in the calm and still night, a storm that had been gathering reached us; but it lasted only for a short time, and cleared off after a shower, which gave the air a freshness that was delightful after the sultry heat we had experienced during the day.

The canoes of this archipelago were found to be different from any that we had heretofore seen, not only in shape, but in making use of a double outrigger, which consequently must give them additional security. The paddle also is of a different shape, and has a blade at each end, which are used alternately, thus enabling a single person to manage them with ease. These canoes are made of a single log, though some are built upon. They seldom carry more than two persons. The figure on the opposite page will give a correct idea of one of them.



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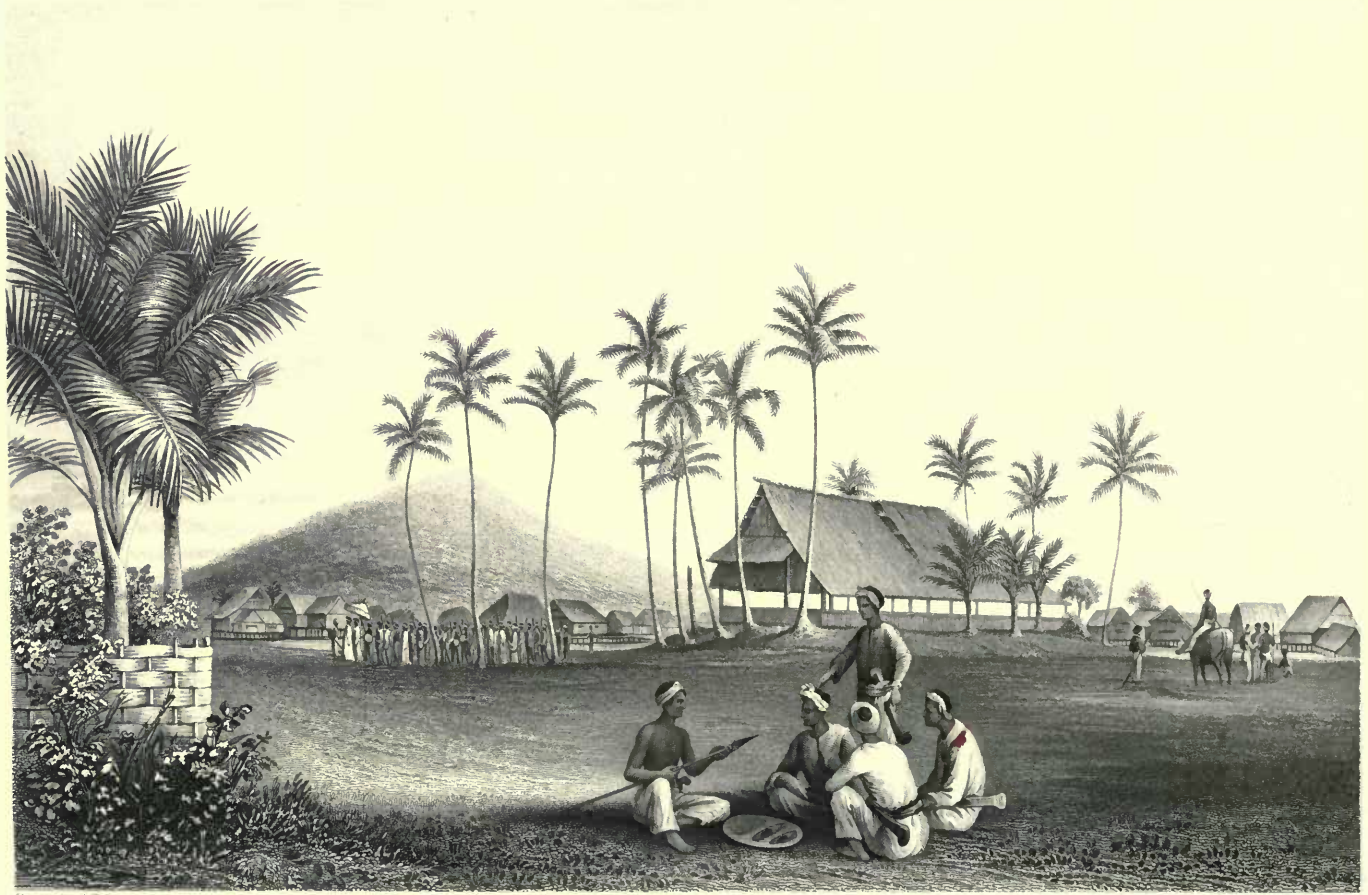
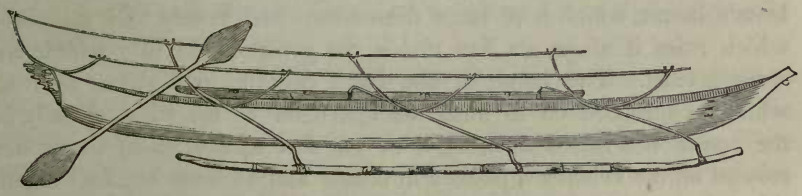


Drawn by A.T.Agate

I.B Neagle Sc

MOSQUE IN THE TOWN OF SOOLOO.

We saw the fishermen engaged in trolling and using the line; but the manner of taking fish which has been heretofore described is chiefly practised. In fishing, as well as in all their other employments, the kris and spear were invariably by their side.



SOOLOO CANOE.

The next morning at eight o'clock we got under way, and were towed by our boats into the bay of Soung, where we anchored off the town in nine fathoms water. While in the act of doing so, and after our intentions had become too evident to admit of a doubt, the Sultan graciously sent off a message giving us permission to enter his port.

Lieutenant Budd was immediately despatched with the interpreter to call upon the Datu Mulu or governor, and to learn at what hour we could see the Sultan. When the officer reached the town, all were found asleep; and after remaining four hours waiting, the only answer he could get out of the Datu Mulu was, that he supposed that the Sultan would be awake at three o'clock, when he thought I could see him.

During this time the boats had been prepared for surveying; and after landing the naturalists, they began the work.

At the appointed time, Captain Hudson and myself went on shore to wait upon the Sultan. On our approach to the town, we found that a great proportion of it was built over the water on piles, and only connected with the shore by narrow bridges of bamboo. The style of building in Sooloo does not differ materially from that of the Malays. The houses are rather larger, and they surpass the others in filth.

HOUSES AT SOUNG.

We passed for some distance between the bridges to the landing,

and on our way saw several piratical prahus apparently laid up. Twenty of these were counted, of about thirty tons burden, evidently built for sea-vessels, and capable of mounting one or two long guns. We landed at a small streamlet, and walked a short distance to the Datu's house, which is of large dimensions and rudely built on piles, which raise it about six feet above the ground, and into which we were invited. The house of the Datu contains one room, part of which is screened off to form the apartment of his wife. Nearly in the centre is a raised dais, eight or ten feet square, under which are stowed all his valuables, packed in chests and Chinese trunks. Upon this dais are placed mats for sleeping, with cushions, pillows, &c.; and over it is a sort of canopy, hung around with fine chintz or muslin.

The dais was occupied by the Datu, who is, next to the Sultan, the greatest man of this island. He at once came from it to receive us, and had chairs provided for us near his sanctum. After we were seated, he again retired to his lounge. The Datu is small in person, and emaciated in form, but has a quick eye and an intelligent countenance. He lives, as he told me, with all his goods around him, and they formed a collection such as I could scarcely imagine it possible to bring together in such a place. The interior put me in mind of a barn inhabited by a company of strolling players. On one side were hung up a collection of various kinds of gay dresses, here drums and gongs, there swords, lanterns, spears, muskets, and small cannon; on another side were shields, bucklers, masks, saws, and wheels, with belts, bands, and long robes. The whole was a strange mixture of tragedy and farce; and the group of natives were not far removed in appearance from the supernumeraries that a Turkish tragedy might have brought together in the green-room of a theatre. A set of more cowardly-looking miscreants I never saw. They appeared ready either to trade with us, pick our pockets, or cut our throats, as an opportunity might offer.

The wife's apartment was not remarkable for its comforts, although the Datu spoke of it with much consideration, and evidently held his better half in high estimation. He was also proud of his six children, the youngest of whom he brought out in its nurse's arms, and exhibited with much pride and satisfaction. He particularly drew my attention to its little highly-wrought and splendidly-mounted kris, which was stuck through its girdle, as an emblem of his rank. He was in reality a fine-looking child. The kitchen was behind the house, and occupied but a small space, for they have little in the way of food that requires much preparation. The house of the Datu might justly be termed nasty.

We now learned the reason why the Sultan could not be seen: it was Friday, the Mahomedan Sabbath, and he had been at the mosque from an early hour. Lieutenant Budd had been detained, because it was not known when he would finish his prayers; and the ceremonies of the day were more important than usual, on account of its peculiar sanctity in their calendar.

Word had been sent off to the ship that the Sultan was ready to receive me, but the messenger passed us while on our way to the shore. After we had been seated for a while, the Datu asked if we were ready to accompany him to see the Sultan; but intimated that no one but Captain Hudson and myself could be permitted to lay eyes on him. Being informed that we were, he at once, and in our presence, slipped on his silken trousers, and a new jacket, covered with bell-buttons; put on his slippers, strapped himself round with a long silken net sash, into which he stuck his kris, and, with umbrella in hand, said he was ready. He now led the way out of his house, leaving the motley group behind, and we took the path to the interior of the town, towards the Sultan's. The Datu and I walked hand in hand, on a roadway about ten feet wide, with a small stream running on each side. Captain Hudson and the interpreter came next, and a guard of six trusty slaves brought up the rear.

When we reached the outskirts of the town, about half a mile from the Datu's, we came to the Sultan's residence, where he was prepared to receive us in state. His house is constructed in the same manner as that of the Datu, but is of larger dimensions, and the piles are rather higher. Instead of steps, we found a ladder, rudely constructed of bamboo, and very crazy. This was so steep that it was necessary to use the hands in mounting it. I understood that the ladder was always removed in the night, for the sake of security. We entered at once into the presence-chamber, where the whole divan, if such it may be called, sat in arm-chairs, occupying the half of a large round table, covered with a white cotton cloth. On the opposite side of the table, seats were placed for us. On our approach, the Sultan and all his council rose, and motioned us to our seats. When we had taken them, the part of the room behind us was literally crammed with well-armed men. A few minutes were passed in silence, during which time we had an opportunity of looking at each other, and around the hall in which we were seated. The latter was of very common workmanship, and exhibited no signs of oriental magnificence. Overhead hung a printed cotton cloth, forming a kind of tester, which covered about half of the apartment. In other places the roof and rafters were visible. A part of the house was roughly

partitioned off, to the height of nine or ten feet, enclosing, as I was afterwards told, the Sultan's sleeping apartment, and that appropriated to his wife and her attendants.

The Sultan is of the middle height, spare and thin; he was dressed in a white cotton shirt, loose trousers of the same material, and slippers; he had no stockings; the bottom of his trousers was worked in scollops with blue silk, and this was the only ornament I saw about him. On his head he wore a small coloured cotton handkerchief, wound into a turban, that just covered the top of his head. His eyes were bloodshot, and had an uneasy wild look, showing that he was under the effects of opium, of which they all smoke large quantities. His teeth were as black as ebony, which, with his bright cherry-coloured lips,* contrasted with his swarthy skin, gave him any thing but a pleasant look.

On the left hand of the Sultan sat his two sons, while his right was occupied by his councillors; just behind him, sat the carrier of his betel-nut casket. The casket was of filigree silver, about the size of a small tea-caddy, of oblong shape, and rounded at the top. It had three divisions, one for the leaf, another for the nut, and a third for the lime. Next to this official was the pipe-bearer, who did not appear to be held in such estimation as the former.

I opened the conversation by desiring that the Datu would explain the nature of our visit, and tell the Sultan that I had come to make the treaty which he had some time before desired to form with the United States.†

The Sultan replied, that such was still his desire; upon which I told him, I would draw one up for him, that same day. While I was explaining to him the terms, a brass candlestick was brought in with a lighted tallow candle, of a very dark colour, and rude shape, that showed but little art in the manufacture. This was placed in the centre of the table, with a plate of Manilla cigars. None of them, however, were offered to us, nor any kind of refreshment.

Our visit lasted nearly an hour. When we arose to take our leave, the Sultan and his divan did the same, and we made our exit with low bows on each side.

I looked upon it as a matter of daily occurrence for all those who came to the island to visit the Sultan; but the Datu Mulu took great

* Chewing the betel-nut and pepper-leaf also produces this effect, and is carried to a great extent among these islanders.

† The Sultan, on the visit of one of our merchant-vessels, had informed the supercargo that he wished to encourage our trade, and to see the vessels of the United States coming to his port.

pains to make me believe that a great favour had been granted in allowing us a sight of his ruler. On the other hand, I dwelt upon the condescension it was on my part to visit him, and I refused to admit that I was under any gratitude or obligation for the sight of His Majesty the Sultan Mohammed Damaliel Kisand, but said that he might feel grateful to me if he signed the treaty I would prepare for him.

On our return from the Sultan's to the Datu Mulu's house, we found even a greater crowd than before. The Datu, however, contrived to get us seats. The attraction which drew it together was to look at Mr. Agate, who was taking a sketch of Mohammed Polalu, the Sultan's son, and next heir to the throne. I had hoped to procure one of the Sultan, but this was declared to be impossible. The son, however, has all the characteristics of the Sooloos, and the likeness was thought an excellent one. Mohammed Polalu is about twenty-three years of age, of a tall slender figure, with a long face, heavy and dull eyes, as though he was constantly under the influence of opium. So much, indeed, was he addicted to the use of this drug, even according to the Datu Mulu's accounts, that his strength and constitution were very much impaired. As he is kept particularly under the guardianship of the Datu, the latter has a strong interest in preserving this influence over him, and seems on this account to afford him every opportunity of indulging in this deplorable habit.

During our visit, the effects of a pipe of this drug was seen upon him; for but a short time after he had reclined himself on the Datu's couch and cushion, and taken a few whiffs, he was entirely overcome, stupid, and listless. I had never seen any one so young, bearing such evident marks of the effects of this deleterious drug. When but partially recovered from its effects he called for his betel-nut, to revive him by its exciting effects. This was carefully chewed by his attendant to a proper consistency, moulded in a ball about the size of a walnut, and then slipped into the mouth of the heir apparent.

One of the requests I had made of the Sultan was, that the officers might have guides to pass over the island. This was at once said to be too dangerous to be attempted, as the datus of the interior and southern towns would in all probability attack the parties. I understood what this meant, and replied that I was quite willing to take the responsibility, and that the party should be well armed. To this the Sultan replied, that he would not risk his own men. This I saw was a mere evasion, but it was difficult and would be dangerous for our gentlemen to proceed alone, and I therefore said no more. On our return to the Datu's, I gave them permission to get as far from the

beach as they could, but I was afterwards informed by them that in endeavouring to penetrate into the woods, they were always stopped by armed men. This was also the case when they approached particular parts of the town, but they were not molested as long as their rambles were confined to the beach. At the Datu's we were treated to chocolate and negus in gilt-edged tumblers, with small stale cakes, which had been brought from Manilla.

After we had sat some time I was informed that Mr. Dana missed his bowie-knife pistol, which he had for a moment laid down on a chest. I at once came to the conclusion that it had been stolen, and as the theft had occurred in the Datu's house, I determined to hold him responsible for it, and gave him at once to understand that I should do so, informing him that the pistol must be returned before the next morning, or he must take the consequences. This threw him into some consternation, and by my manner he felt that I was serious.

Captain Hudson and myself, previous to our return on board, visited the principal parts of the town. The Chinese quarter is separated by a body of water, and has a gateway that leads to a bridge. The bridge is covered by a roof, and on each side of it are small shops, which are open in front, and thus expose the goods they contain. In the rear of the shops were the dwellings of the dealers. This sort of bazaar contained but a very scanty assortment, and the goods were of inferior quality.

We visited some blacksmith-shops, where they were manufacturing krises and spears. These shops were open sheds; the fire was made upon the ground, and two wooden cylinders, whose valves were in the bottom, served for bellows; when used, they had movable pistons, which were worked by a man on an elevated seat, and answered the purpose better than could have been expected.

The kris is a weapon in which this people take great pride; it is of various shapes and sizes, and is invariably worn from infancy to old age; they are generally wavy in their blades, and are worn in wooden scabbards, which are neatly made and highly polished. This weapon is represented in the tail-piece to this chapter.

The market was well stocked with fruit and fish. Among the former the durian seemed to predominate; this was the first time we had seen it. It has a very disagreeable odour, as if decayed, and appears to emit a sulphuretted hydrogen gas, which I observed blackened silver. Some have described this fruit as delicious, but if the smell is not enough, the taste in my opinion will convince any one of the contrary.

Mr. Brackenridge made the following list of their fruits: Durian, Artocarpus integrifolia, Melons, water and musk, Oranges, mandarin and bitter, Pine-apples, Carica papaya, Mangosteen, Bread-fruit, Cocoa

and Betel-nut. The vegetables were capsicums, cucumbers, yams, sweet-potatoes, garlic, onions, edible fern-roots, and radishes of the salmon variety, but thicker and more acrid in flavour.

In walking about the parts of the town we were permitted to enter, large slabs of cut granite were seen, which were presumed to be from China, where the walls of canals or streamlets are lined with it. But Dr. Pickering in his rambles discovered pieces that had been cut as if to form a monument, and remarked a difference between it and the Chinese kind. On one or two pieces he saw the mark No. 1, in black paint; the material resembled the Chelmsford granite, and it occurred to him that the stone had been cut in Boston.* I did not hear of this circumstance until after we had left Sooloo, and have little doubt now that the interdiction against our gentlemen visiting some parts of the town was owing to the fear they had of the discovery of this plunder. This may have been the reason why they so readily complied with my demands, in order to get rid of us as soon as possible, feeling themselves guilty, and being unprepared for defence; for, of the numerous guns mounted, few if any were serviceable.

The theft of the pistol was so barefaced an affair, that I made up my mind to insist on its restoration. At the setting of the watch in the evening, it had been our practice on board the Vincennes to fire a small brass howitzer. This frequently, in the calm evenings, produced a great reverberation, and rolled along the water to the surrounding islands with considerable noise. Instead of it, on this evening, I ordered one of the long guns to be fired, believing that the sound and reverberation alone would suffice to intimidate such robbers. One was accordingly fired in the direction of the town, which fairly shook the island, as they said, and it was not long before we saw that the rogues were fully aroused, for the clatter of gongs and voices that came over the water, and the motion of lights, convinced me that the pistol would be forthcoming in the morning. In this I was not mistaken, for at early daylight I was awakened by a special messenger from the Datu to tell me that the pistol was found, and would be brought off without delay; that he had been searching for it all night, and had at last succeeded in finding it, as well as the thief, on whom he intended to inflict the bastinado. Accordingly, in a short time the pistol was delivered on board, and every expression of friendship and good-will given, with the strongest assurances that nothing of the kind should happen again.

* Since our return, inquiries have been made by him, which resulted in proving that such was in truth their origin, and that the vessel in which they were shipped was for a long time missing. The identical stones which he saw were a part of a monument that was on its way to Canton.

As our naturalists could have no opportunity of rambling over the island of Sooloo, it was thought that one of the neighbouring islands (although not so good a field) would afford them many of the same results, and that they could examine it unmolested. Accordingly, at an early hour, they were despatched in boats for that purpose, with a sufficient guard to attend them in case of necessity. The island on which they landed is called Marongas on the map of the group annexed to this chapter. On it are two hills of volcanic conglomerate and vesicular lava, containing angular fragments embedded. The bottom was covered with living coral, of every variety, and of different colours; but there was nothing like a regular coral shelf, and the beach was composed of bits of coral intermixed with dead shells, both entire and comminuted. The centre of the island was covered with mangrove-bushes; the hills were cones, but had no craters on them. The mangroves had grown in clusters, giving the appearance of a number of small islets. This, with the neighbouring islands, were thought to be composed in a great part of coral, but it was impossible for our gentlemen to determine the fact.

The day was exceedingly hot, and the island was suffering to such a degree from drought that the leaves in many cases were curled and appeared dry. On the face of the rocky cliff they saw many swallows (hirundo esculenta) flying in and out of the caverns facing the sea; but they were not fortunate enough to find any of the edible nests, so much esteemed by Chinese epicures.

At another part of the island they heard the crowing of a cock, and discovered a small village, almost hidden by the mangroves, and built over the water. In the neighbourhood were several fish-baskets set out to dry, as well as a quantity of fencing for weirs, all made of rattan. Their shape was somewhat peculiar. After a little while the native fishermen were seen approaching, who evidently had a knowledge of their visit from the first. They came near with great caution in their canoes; but after the first had spoken and reconnoitred, several others landed, exhibiting no signs of embarrassment, and soon motioned our party off. To indicate that force would be resorted to, in case of refusal, at the same time they pointed to their arms, and drew their krises. Our gentlemen took this all in good part, and, after dispensing a few trifling presents among them, began their retreat with a convenient speed, without, however, compromising their dignity.

The excursion had been profitable in the way of collections, having yielded a number of specimens of shrubs and trees, both in flower and fruit; but owing to the drought, the herbaceous plants were, for the most part, dried up. Among the latter, however, they saw a large and

fine terrestrial species of Epidendrum, whose stem grew to the height of several feet, and when surmounted by its flowers reached twelve or fifteen feet high. Many of the salt-marsh plants seen in the Feejees, were also observed here. Besides the plants, some shells and a beautiful cream-coloured pigeon were obtained.

During the day we were busily engaged in the survey of the harbour, and in making astronomical and magnetical observations on the beach, while some of the officers were employed purchasing curiosities, on shore, at the town, and alongside the ship. These consisted of krises, spears, shields, and shells; and the Sooloos were not slow in comprehending the kind of articles we were in search of.

Few if any of the Sooloos can write or read, though many talk Spanish. Their accounts are all kept by the slaves. Those who can read and write are, in consequence, highly prized. All the accounts of the Datu of Soung are kept in Dutch, by a young Malay from Ternate, who writes a good hand, and speaks English, and whom we found exceedingly useful to us. He is the slave of the Datu, who employs him for this purpose only. He told us he was captured in a brig by the pirates of Basillan, and sold here as a slave, where he is likely to remain for life, although he says the Datu has promised to give him his freedom after ten years.

Horses, cows, and buffaloes are the beasts of burden, and a Sooloo may usually be seen riding either one or the other, armed cap-a-pie, with kris, spear, and target, or shield.

SOOLOO RIDING.

They use saddles cut out of solid wood, and many ride with their stirrups so short that they bring the knees very high, and the riders

look more like well-grown monkeys than mounted men. The cows and buffaloes are guided by a piece of thong, through the cartilage of the nose. By law, no swine are allowed to be kept on the island, and if they are bought, they are immediately killed. The Chinese are obliged to raise and kill their pigs very secretly, when they desire that species of food; for, notwithstanding the law and the prejudices of the inhabitants, the former continue to keep swine.

The inhabitants of Sooloo are a tall, thin, and effeminate-looking race: I do not recollect to have seen one corpulent person among them. Their faces are peculiar for length, particularly in the lower jaw and chin, with high cheek-bones, sunken, lack-lustre eyes, and narrow foreheads. Their heads are thinly covered with hair, which appears to be kept closely cropped. I was told that they pluck out their beards, and dye their teeth black with antimony, and some file them.

Their eyebrows appear to be shaven, forming a very regular and high arch, which they esteem a great beauty.

The dress of the common people is very like that of the Chinese, with loose and full sleeves, without buttons. The materials of which it is made are grass-cloths, silks, satins, or white cotton, from China. I should judge from the appearance of their persons, that they ought to be termed, so far as ablutions go, a cleanly people. There is no outward respect or obeisance shown by the slave to his master, nor is the presence of the Datu, or even of the Sultan himself, held in any awe. All appear upon an equality, and there does not seem to be any controlling power; yet it may be at once perceived that they are suspicious and jealous of strangers.

The Sooloos, although they are ready to do any thing for the sake of plunder, even to the taking of life, yet are not disposed to hoard their ill-gotten wealth, and, with all their faults, cannot be termed avaricious.

They have but few qualities to redeem their treachery, cruelty, and revengeful dispositions; and one of the principal causes of their being so predominant, or even of their existence, is their inordinate lust for power. When they possess this, it is accompanied by a haughty, consequential, and ostentatious bravery. No greater affront can be offered to a Sooloo, than to underrate his dignity and official consequence. Such an insult is seldom forgiven, and never forgotten. From one who has made numerous voyages to these islands, I have obtained many of the above facts, and my own observation assures me that this view of their character is a correct one. I would, however, add another trait, which is common among them, and that is cowardice,

which is obvious, in spite of their boasted prowess and daring. This trait of character is universally ascribed to them among the Spaniards in the Philippines, who ought to be well acquainted with them.

The dress of the women is not unlike that of the men in appearance. They wear close jackets of various colours when they go abroad, and the same loose breeches as the men, but over them they usually have a large wrapper (sarong), not unlike the pareu of the Polynesian islanders, which is put round them like a petticoat, or thrown over the shoulders. Their hair is drawn to the back of the head, and around the forehead it is shaven in the form of a regular arch, to correspond with the eyebrows. Those that I saw at the Sultan's were like the Malays, and had light complexions, with very black teeth. The Datu thought them very handsome, and on our return he asked me if I had seen the Sultan's beauties. The females of Sooloo have the reputation of ruling their lords, and possess much weight in the government by the influence they exert over their husbands.

It may be owing to this that there is little jealousy of their wives, who are said to hold their virtues in no very great estimation. In their houses they are but scantily clothed, though women of rank have always a large number of rings on their fingers, some of which are of great value, as well as earrings of fine gold. They wear no stockings, but have on Chinese slippers, or Spanish shoes. They are as capable of governing as their husbands, and in many cases more so, as they associate with the slaves, from whom they obtain some knowledge of Christendom, and of the habits and customs of other nations, which they study to imitate in every way.

The mode in which the Sooloos employ their time may be exemplified by giving that of the Datu; for all, whether free or slave, endeavour to imitate the higher rank as far as is in their power. The datus seldom rise before eleven o'clock, unless they have some particular business; and the Datu Mulu complained of being sleepy in consequence of the early hour at which we had disturbed him.

On rising, they have chocolate served in gilt glassware, with some light biscuit, and sweetmeats imported from China or Manilla, of which they informed me they laid in large supplies. They then lounge about their houses, transacting a little business, and playing at various games, or, in the trading season, go to the meeting of the Ruma Bechara.

At sunset they take their principal meal, consisting of stews of fish, poultry, beef, eggs, and rice, prepared somewhat after the Chinese and Spanish modes, mixed up with that of the Malay. Although Moslems, they do not forego the use of wine, and some are said to indulge in it

to a great extent. After sunset, when the air has become somewhat cooled by the refreshing breezes, they sally forth attended by their retainers to take a walk, or proceed to the bazaars to purchase goods, or to sell or to barter away their articles of produce. They then pay visits to their friends, when they are in the habit of having frequent convivial parties, talking over their bargains, smoking cigars, drinking wine and liqueurs, tea, coffee, and chocolate, and indulging in their favourite pipe of opium. At times they are entertained with music, both vocal and instrumental, by their dependants. Of this art they appear to be very fond, and there are many musical instruments among them. A datu, indeed, would be looked upon as uneducated if he could not play on some instrument.

It is considered polite that when refreshments are handed they should be partaken of. Those offered us by the Datu were such as are usual, but every thing was stale. Of fruit they are said to be very fond, and can afford to indulge themselves in any kinds. With all these articles to cloy the appetite, only one set meal a day is taken; though the poorer classes, fishermen and labourers, partake of two.

The government of the Sooloo Archipelago is a kind of oligarchy, and the supreme authority is vested in the Sultan and the Ruma Bechara or trading council. This consists of about twenty chiefs, either datus, or their next in rank, called orangs, who are governors of towns or detached provinces. The influence of the individual chiefs depends chiefly upon the number of their retainers or slaves, and the force they can bring into their service when they require it. These are purchased from the pirates, who bring them to Sooloo and its dependencies for sale. The slaves are employed in a variety of ways, as in trading prahus, in the pearl and biche de mar fisheries, and in the search after the edible birds'-nests.

A few are engaged in agriculture, and those who are at all educated are employed as clerks. These slaves are not denied the right of holding property, which they enjoy during their lives, but at their death it reverts to the master. Some of them are quite rich, and what may appear strange, the slaves of Sooloo are invariably better off than the untitled freemen, who are at all times the prey of the hereditary datus, even of those who hold no official stations. By all accounts these constitute a large proportion of the population, and it being treason for any low-born freeman to injure or maltreat a datu, the latter, who are of a haughty, overbearing, and tyrannical disposition, seldom keep themselves within bounds in their treatment of their inferiors. The consequence is, the lower class of freemen are obliged to put themselves under the protection of some particular datu, which

guards them from the encroachment of others. The chief to whom they thus attach themselves, is induced to treat them well, in order to retain their services, and attach them to his person, that he may, in case of need, be enabled to defend himself from depredations, and the violence of his neighbours.

Such is the absence of legal restraint, that all find it necessary to go abroad armed, and accompanied by a trusty set of followers, who are also armed. This is the case both by day and night, and, according to the Datu's account, frequent affrays take place in the open streets, which not unfrequently end in bloodshed.

Caution is never laid aside, the only law that exists being that of force; but the weak contrive to balance the power of the strong by uniting. They have not only contentions and strife among themselves, but it was stated at Manilla that the mountaineers of Sooloo, who are said to be Christians, occasionally make inroads upon them. At Sooloo, however, it did not appear that they were under much apprehension of these attacks. The only fear I heard expressed was by the Sultan, in my interview with him; and the cause of this, as I have already stated, was probably a desire to find an excuse for not affording us facilities to go into the interior. Within twenty years, however, the reigning sultan has been obliged to retire within his forts, in the town of Sooloo, which I have before adverted to.

These people are hostile to the Sooloos of the coast and towns, who take every opportunity to rob them of their cattle and property, for which the mountaineers seek retaliation when they have an opportunity. From the manner in which the Datu spoke of them, they are not much regarded. Through another source I learned that the mountaineers were Papuans, and the original inhabitants of the islands, who pay tribute to the Sultan, and have acknowledged his authority, ever since they were converted to Islamism. Before that time they were considered extremely ferocious, and whenever it was practicable they were destroyed. Others speak of an original race of Dyacks in the interior, but there is one circumstance to satisfy me that there is no confidence to be placed in this account, namely, that the island is not of sufficient extent to accommodate so numerous a population as some ascribe to it.

The forts consist of a double row of piles, filled in with coral blocks. That situated on the east side of the small stream may be said to mount a few guns, but these are altogether inefficient; and in another, on the west side, which is rather a rude embankment than a fort, there are some twelve or fifteen pieces of large calibre; but I doubt very

much if they had been fired off for years, and many of the houses built upon the water would require to be pulled down before these guns could be brought to bear upon any thing on the side of the bay, supposing them to be in a good condition; a little farther to the east of the town, I was informed they had a kind of stockade, but none of us were permitted to see it.

According to our estimates, and the information we received while at Sooloo, the island itself does not contain more than thirty thousand inhabitants, of which the town of Soung may have six or seven thousand. The whole group may number about one hundred and thirty thousand. I am aware, however, that it is difficult to estimate the population of a half-civilized people, who invariably exaggerate their own strength; and visiters are likewise prone to do the same thing. The Chinese comprise about an eighth of the population of the town, and are generally of the lower class. They are constantly busy at their trades, and intent upon making money.

At Soung, business seems active, and all, slaves as well as masters, seem to engage in it. The absence of a strong government leaves all at liberty to act for themselves, and the Ruma Bechara gives unlimited freedom to trade. These circumstances promote the industry of the community, and even that of the slave, for he too, as before observed, has a life interest in what he earns.

Soung being the residence of the Sultan, as well as the grand depôt for all piratical goods, is probably more of a mart than any of the surrounding towns. In the months of March and April it is visited by several Chinese junks, who remain trading until the beginning of the month of August. If delayed after that time, they can scarcely return in safety, being unable to contend with the boisterous weather and head winds that then prevail in the Chinese seas. These junks are said to come chiefly from Amoy, where the cottons, &c., best suited for the Sooloos are made. Their cargoes consist of a variety of articles of Chinese manufacture and produce, such as silk, satin goods, cottons, red and checked, grass-cloth clothing, handkerchiefs, cutlery, guns, ammunition, opium, lumber, china and glass-ware, rice, sugar, oil, lard, and butter. In return for this merchandise they obtain camphor, birds'-nests, rattans, biche de mar, pearls and pearl-shells, cocoa, tortoise-shell, and wax; but there is no great quantity of these articles to be obtained, perhaps not more than two or three cargoes during the season. The trade requires great knowledge of the articles purchased, for the Chinese and Sooloos are both such adepts in fraud, that great caution and circumspection are necessary.

The duties on importation are not fixed, but are changed and altered from time to time by the Ruma Bechara. The following was stated to me as the necessary payments before trade could be carried on.

A large ship, with Chinese on board, pays	$2,000
" without " "	1,800
Small ships,	1,500
Large brig,	1,000
Small brig,	500
Schooners,	from 150 to 400

This supposes them all to have full cargoes. That a difference should be made in a vessel with or without Chinamen, seems singular; but this, I was told, arose from the circumstance that English vessels take them on board, in order to detect and prevent the impositions of the Sooloos.

Vessels intending to trade at Soung should arrive before the Chinese junks, and remain as long as they stay, or even a few days later. In trading with the natives, all operations ought to be carried on for cash, or if by barter, no delivery should be made until the articles to be taken in exchange are received. In short, it is necessary to deal with them as though they were undoubted rogues, and this pleases them much more than to appear unsuspicious. Vessels that trade engage a bazaar, which they hire of the Ruma Bechara, and it is advisable to secure the good-will of the leading datus in that council by presents, and paying them more for their goods than others.

There are various other precautions necessary in dealing with this people; for they will, if possible, so act as to give rise to disputes, in which case an appeal is made to their fellows, who are sure to decide against the strangers. Those who have been engaged in this trade, advise that the prices of the goods should be fixed upon before the Sultan, and the scales of the Datu of Soung employed; for although these are quite faulty, the error is compensated by the articles received being weighed in the same. This also secures the Datu's good-will, by the fee (some fifty dollars) which he receives for the use of them. Thus it will be perceived that those who desire to trade with Sooloo, must make up their minds to encounter many impositions, and to be continually watchful of their own interests.

Every possible precaution ought to be taken; and it will be found, the treatment will depend upon, or be according to the force or resolution that is displayed. In justice to this people it must be stated, there have been times when traders received every kindness and attention at the island of Sooloo, and I heard it even said, that many vessels had gone there to refit; but during the last thirty or forty years, the reigning

sultans and their subjects have become hostile to Europeans, of whom they plunder and destroy as many as they can, and this they have hitherto been allowed to do with impunity.

Although I have described the trade with Sooloo as limited, yet it is capable of greater extension; and had it not been for the piratical habits of the people, the evil report of which has been so widely spread, Sooloo would now have been one of the principal marts of the East. The most fertile parts of Borneo are subject to its authority. There all the richest productions of these Eastern seas grow in immense quantities, but are now left ungarnered in consequence of there being no buyers. The cost of their cultivation would be exceedingly low, and I am disposed to believe that these articles could be produced here at a lower cost than any where else.

Besides the trade with China, there is a very considerable one with Manilla in small articles, and I found one of our countrymen engaged in this traffic, under the Spanish flag. To him I am indebted for much information that his opportunities of observation had given him.

The materials for the history of Sooloo are meagre, and great doubt seems to exist in some periods of it. That which I have been able to gather is as follows.

The island of Sooloo is generally believed to have been originally inhabited by Papuans, some of whom, as I have already stated, are still supposed to inhabit the mountainous part. The first intercourse had with them was by the Chinese, who went there in search of pearls. The Orang Dampuwans were the first of the Malays to form settlements on the islands; but after building towns, and making other improvements, they abandoned the islands, in consequence, it is said, of the inhabitants being a perfidious race, having previously to their departure destroyed as many of the natives as they could.

The fame of the submarine riches of this archipelago reached Banjar, or Borneo, the people of which were induced to resort there, and finding it to equal their expectation, they sent a large colony, and made endeavours to win over the inhabitants, and obtain thereby the possession of their rich isle. In order to confirm the alliance, a female of Banjarmassing, of great beauty, was sent, and married to the principal chief; and from this alliance the sovereigns of Sooloo claim their descent. The treaty of marriage made Sooloo tributary to the Banjarmassing empire.

After the Banjars had thus obtained possession of the archipelago, the trade in its products attracted settlers from the surrounding islands, who soon contrived to displace the aborigines, and drive them to the inaccessible mountains for protection.

When the Chinese took possession of the northern parts of Borneo, under the Emperor Songtiping, about the year 1375, the daughter of that prince was married to a celebrated Arabian chief named Sherif Alli, who visited the shores of Borneo in quest of commerce. The descendants of this marriage extended their conquests not only over the Sooloo Archipelago, but over the whole of the Philippines, and rendered the former tributary to Borneo. In three reigns after this event, the sultan of Borneo proper married the daughter of a Sooloo chief, and from this union came Mirhome Bongsu, who succeeding to the throne while yet a minor, his uncle acted as regent. Sooloo now wished to throw off the yoke of Borneo, and through the intrigues of the regent succeeded in doing so, as well as in retaining possession of the eastern side of Borneo, from Maludu Bay on the north, to Tulusyan on the south, which has ever since been a part of the Sooloo territory.

This event took place before Islamism became the prevailing religion; but which form of idolatry, the Sooloos pretend, is not now known. It is, however, believed the people on the coasts were Budhists, while those of the interior were Pagans.

The first sultan of Sooloo was Kamaludin, and during his reign one Sayed Alli, a merchant, arrived at Sooloo from Mecca. He was a sherif, and soon converted one-half of the islanders to his own faith. He was elected sultan on the death of Kamaludin, and reigned seven years, in the course of which he became celebrated throughout the archipelago. Dying at Sooloo, a tomb was erected to him there, and the island came to be looked upon by the faithful as the Mecca of the East, and continued to be resorted to as a pilgrimage until the arrival of the Spaniards.

Sayed Alli left a son called Batua, who succeeded him. The latter had two sons, named Sabudin and Nasarudin, who, on the death of their father, made war upon each other. Nasarudin, the youngest, being defeated, sought refuge on Tawi Tawi, where he established himself, and built a fort for his protection. The difficulties were finally compromised, and they agreed to reign together over Sooloo. Nasarudin had two sons, called Amir and Bantilan, of whom the former was named as successor to the two brothers, and on their deaths ascended the throne. During his reign another sherif arrived from Mecca, who succeeded in converting the remainder of the population to Islamism. Bantilan and his brother Amir finally quarrelled, and the latter was driven from Sooloo to seek refuge in the island of Basillan, where he became sultan.

On the arrival of the Spaniards in 1566, a kind of desultory war was waged by them upon the various islands, in the hope of conquer-

ing them and extending their religion. In these wars they succeeded in gaining temporary possession of a part of Sooloo, and destroyed the tomb of Sayed Alli. The Spaniards always looked upon the conversion of the Moslems to the true Catholic faith with great interest; but in the year 1646, the sultan of Magindanao succeeded in making peace, by the terms of which the Spaniards withdrew from Sooloo, and were to receive from the sultan three cargoes of rice annually as a tribute.

In 1608, the small-pox made fearful ravages, and most of the inhabitants fled from the scourge. Among these was the heir apparent, during whose absence the throne became vacant, and another was elected in his stead. This produced contention for a short time, which ended in the elected maintaining his place.

This tribute continued to be paid until the flight of Amir to Basillan, about the year 1752, where he entered into a secret correspondence with the authorities at Samboangan, and after two years a vessel was sent from Manilla, which carried him to that capital, where he was treated as a prisoner of state.

In June, 1759, an English ship, on board of which was Dalrymple, then in the service of the East India Company, arrived at Sooloo on a trading voyage. Dalrymple remained at Sooloo for three months, engaged in making sales and purchases. The Sultan Bantilan treated him with great kindness, and sought the interest of Dalrymple to obtain the liberation of his brother, who was now held prisoner by the Spaniards at Manilla, by telling him of the distress of his brother's wife, who had been left behind when Amir quitted the island, and had been delivered of twins, after he had been kidnapped by the Spaniards. Dalrymple entered into a pledge to restore Amir, and at the same time effected a commercial treaty between the East India Company and the Sooloo chiefs. By this it was stipulated that an annual cargo should be sent to Sooloo, and sold at one hundred per cent. profit, for which a return cargo should be provided for the China market, which should realize an equal profit there, after deducting all expenses. The overplus, if any, was to be carried to the credit of the Sooloos. This appears to have been the first attempt made by the English to secure a regular commercial intercourse with this archipelago.

In the year 1760, a large fleet of Spanish vessels sailed from Manilla, with about two thousand men, having the Sultan Amir on board, to carry on a war against Sooloo.

On their arrival, they began active operations. They were repelled on all sides, and after seven days' ineffectual attempts, they gave up their design. They returned to Manilla, it is said, with a loss of half

their number, and without having done any injury to the Sooloos. Not discouraged with this failure, the Spaniards, about two years after, organized a still larger force, which is estimated by some accounts as high as ten thousand men. Although this failed in its attempts on the fort at Soung, the Spaniards obtained possession of Tanjong Matonda, one of the small ports on the island, where they erected a church and fort. Here they established a colony, and appointed a governor. The inhabitants upon this deserted their habitations in the neighbourhood, and fled to the mountains, which, it is said, excited the mountaineers, a host of whom, with their chief, whose name was Sri Kala, determined to rush upon the Spaniards, and annihilate them. Having to contend against disciplined troops, it was not an easy task to succeed. But Sri Kala had a follower, named Sigalo, who offered to lead the host to battle against the Spaniards, and to exterminate them, or die in the attempt. The chief accepted his offer, and Sigalo, with a chosen few, marched towards the fort, leaving the rest of the mountaineers in readiness to join them at an appointed signal, and rush into the fort en masse.

Sri Kala and Sigalo, in order to lull the watchfulness of the Spaniards, took with them a young woman, of exquisite beauty, named Purmassuri. The lustful Spaniards were thus thrown off their guard, the signal was given, and the host, rushing forward, entered the fort, every Spaniard within which was slain. A few only, who were on the outside, escaped to the vessels, which set sail, and after encountering various mishaps, returned to Manilla.

Some time after this the Sultan Bantilan died, and his son Alim-uddeen was proclaimed sultan. Dalrymple did not return until 1762, with a part of the appointed cargo; but the vessel in which the larger part had been shipped, failed to arrive, from not being able to find Sooloo, and went to China. Thence she proceeded to Manilla, and afterwards to Sooloo. The captain of the latter vessel gave a new credit to the Sooloos, before they had paid for their first cargo; and on the arrival of Dalrymple the next time, he found that the small-pox had carried off a large number of the inhabitants, from which circumstance all his hopes of profit were frustrated. He then obtained for the use of the East India Company, a grant of the island of Balambangan, which lies off the north end of Borneo, forming one side of the Straits of Balabac, the western entrance to the Sooloo Sea. Here he proposed to establish a trading port, and after having visited Madras, he took possession of this island in 1763.

In October, 1763, the English took Manilla, where the Sultan Amir was found by Dalrymple, who engaged to reinstate him on his throne,

if he would cede to the English the north end of Borneo, as well as the south end of Palawan. This he readily promised, and he was, in consequence, carried back to Sooloo and reinstated; his nephew, Alim-ud-deen, readily giving place to him, and confirming the grant to the East India Company, in which the Ruma Bechara joined.

After various arrangements, the East India Company took possession of Balambangan, in the year 1773, and formed a settlement there with a view of making it an emporium of trade for Eastern commodities. Troops and stores were sent from India, and the population began to increase by settlers, both Chinese and Malays, who arrived in numbers. In the year 1775, the fort, notwithstanding all the treaties and engagements between Dalrymple and the Sultan, was surprised by the Sooloos, and many of the garrison put to death. This virtually put an end to the plans of the English, although another attempt was made to re-establish the settlement by Colonel Farquhar, in 1803; but it was thought to be too expensive a post, and was accordingly abandoned in the next year. This act of the Sooloos fairly established their character for perfidy, and ever since that transaction they have been looked upon as treacherous in the highest degree, and, what is singular, have been allowed to carry on their piracies quite unmolested. The taking of Balambangan has been generally imputed to the treacherous disposition and innate love of plunder among the Sooloos, as well as to their fear that it would destroy the trade of Sooloo by injuring all that of the archipelago. But there are strong reasons for believing that this dark deed owed its origin in part to the influence of the Spaniards and Dutch, who looked with much distrust upon the growth of the rival establishment. Such was the jealousy of the Spaniards, that the governor of the Philippines peremptorily required that Balambangan should be evacuated. The Sooloos boast of the deed, and admit that they received assistance from both Samboangan and Ternate, the two nearest Spanish and Dutch ports. These nations had great reasons to fear the establishment of a power like that of the East India Company, in a spot so favourably situated to secure the trade of the surrounding islands, possessing fine harbours, and in every way adapted to become a great commercial depôt. Had it been held by the East India Company but for a few years, it must have become what Singapore is now.

The original planner of this settlement is said to have been Lord Pigot; but the merit of carrying it forward was undoubtedly due to Dalrymple, whose enterprising mind saw the advantage of the situation, and whose energy was capable of carrying the project successfully forward.

Since the capture of Balambangan, there has been no event in the

history of Sooloo that has made any of the reigns of the sultans memorable, although fifteen have since ascended the throne.

Sooloo has from all the accounts very much changed in its character as well as population since the arrival of the Spaniards, and the establishment of their authority in the Philippines. Before that event, some accounts state that the trade with the Chinese was of great extent, and that from four to five hundred junks arrived annually from Cambojia, with which Sooloo principally traded. At that time the population is said to have equalled in density that of the thickly-settled parts of China.

The government has also undergone a change; for the sultan, who among other Malay races is usually despotic, is here a mere cipher, and the government has become an oligarchy. This change has probably been brought about by the increase of the privileged class of datus, all of whom were entitled to a seat in the Ruma Bechara until about the year 1810, when the great inconvenience of so large a council was felt, and it became impossible to control it without great difficulty and trouble on the part of the sultan. The Ruma Bechara was then reduced until it contained but six of the principal datus, who assumed the power of controlling the state. The Ruma Bechara, however, in consequence of the complaints of many powerful datus, was enlarged; but the more powerful, and those who have the largest numerical force of slaves, still rule over its deliberations. The whole power, within the last thirty years, has been usurped by one or two datus, who now have monopolized the little foreign trade that comes to these islands. The sultan has the right to appoint his successor, and generally names him while living. In default of this, the choice devolves upon the Ruma Bechara, who elect by a majority.

From a more frequent intercourse with Europeans and the discovery of new routes through these seas, the opportunities of committing depredations have become less frequent, and the fear of detection greater. By this latter motive they are more swayed than by any thing else, and if the Sooloos have ever been bold and daring robbers on the high seas, they have very much changed.

Many statements have been made and published relative to the piracies committed in these seas, which in some cases exceed, and in others fall short, of the reality. Most of the piratical establishments are under the rule, or sail under the auspices of the Sultan and Ruma Bechara of Sooloo, who are more or less intimately connected with them. The share of the booty that belongs to the Sultan and Ruma Bechara is twenty-five per cent. on all captures, whilst the datus receive a high price for the advance they make of guns and powder, and for the services of their slaves.

The following are the piratical establishments of Sooloo, obtained from the most authentic sources, published as well as verbal. The first among these is the port of Soung, at which we anchored, in the island of Sooloo; not so much from the number of men available here for this pursuit, as the facility of disposing of the goods. By the Spaniards they are denominated Illanun or Lanuns pirates.* There are other rendezvous on Pulo Toolyan, at Bohol, Tonho, Pilas, Tawi Tawi, Sumlout, Pantutaran, Parodasan, Palawan, and Basillan, and Tantoli on Celebes. These are the most noted, but there are many minor places, where half a dozen prahus are fitted out. Those of Sooloo, and those who go under the name of the Lanuns, have prahus of larger size, and better fitted. They are from twenty to thirty tons burden, and are propelled by both sails and oars. They draw but little water, are fast sailers, and well adapted for navigating through these dangerous seas. These pirates are supposed to possess in the whole about two hundred prahus, which usually are manned with from forty to fifty pirates; the number therefore engaged in this business, may be estimated at ten thousand. They are armed with muskets, blunderbusses, krises, hatchets, and spears, and at times the vessels have one or two large guns mounted. They infest the Straits of Macassar, the Sea of Celebes, and the Sooloo Sea. Soung is the only place where they can dispose of their plunder to advantage, and obtain the necessary outfits. It may be called the principal resort of these pirates, where well-directed measures would result in effectually suppressing the crime.

Besides the pirates of Sooloo, the commerce of the eastern islands is vexed with other piratical establishments. In the neighbouring seas, there are the Malay pirates, who have of late years become exceedingly troublesome. Their prahus are of much smaller size than those of Sooloo, being from ten to twelve tons burden, but in proportion they are much better manned, and thus are enabled to ply with more efficiency their oars or paddles. These prahus frequent the shores of the Straits of Malacca, Cape Romania, the Carimon Isles, and the neighbouring straits, and at times they visit the Straits of Rhio. Some of the most noted, I was informed, were fitted out from Johore, in the very neighbourhood of the English authorities at Singapore; they generally have their haunts on the small islands on the coast, from which they make short cruises.

They are noted for their arrangements for preventing themselves from receiving injury, in the desperate defences that are sometimes made against them. These small prahus have usually swivels mounted,

* This name is derived from the large bay that makes in on the south side of the island of Mindanao, and on which a set of freebooters reside.

which, although not of great calibre, are capable of throwing a shot beyond the range of small-arms. It is said that they seldom attempt an attack unless the sea is calm, which enables them to approach their victims with more assurance of success, on account of the facility with which they are enabled to manage their boats. The frequent calms which occur in these seas between the land and sea breezes, afford them many opportunities of putting their villanous plans in operation; and the many inlets and islets, with which they are well acquainted, afford places of refuge and ambush, and for concealing their booty. They are generally found in small flotillas of from six to twenty prahus, and when they have succeeded in disabling a vessel at long shot, the sound of the gong is the signal for boarding, which, if successful, results in a massacre more or less bloody, according to the obstinacy of the resistance they have met with.

In the winter months, the Straits of Malacca are most infested with them; and during the summer, the neighbourhood of Singapore, Point Romania, and the channels in the vicinity. In the spring, from February to May, they are engaged in procuring their supplies, in fishing, and refitting their prahus for the coming year.

I have frequently heard plans proposed for the suppression of these pirates, particularly of those in the neighbourhood of the settlements under British rule. The European authorities are much to blame for the quiescent manner in which they have so long borne these depredations, and many complaints are made that Englishmen, on being transplanted to India, lose that feeling of horror for deeds of blood, such as are constantly occurring at their very doors, which they would experience in England. There are, however, many difficulties to overcome before operations against the pirates can be effective. The greatest of these is the desire of the English to secure the goodwill of the chiefs of the tribes by whom they are surrounded. They thus wink at their piracies on the vessels of other nations, or take no steps to alleviate the evils of slavery. Indeed the language that one hears from many intelligent men who have long resided in that part of the world is, that in no country where civilization exists does slavery exhibit so debasing a form as in her Indian possessions. Another difficulty consists in the want of minute knowledge of the coasts, inlets, and hiding-places of the pirates, and this must continue to exist until proper surveys are made. This done, it would be necessary to employ vessels that could pursue the pirates every where, for which purpose steamers naturally suggest themselves.

What will appear most extraordinary is, that the very princes who are enjoying the stipend for the purchase of the site whereon the

English authority is established, are believed to be the most active in equipping the prahus for these piratical expeditions; yet no notice is taken of them, although it would be so easy to control them by withholding payment until they had cleared themselves from suspicion, or by establishing residents in their chief towns.

Another, and a very different race of natives who frequent the Sooloo Archipelago, must not be passed by without notice. These are the Bajow divers or fishermen, to whom Sooloo is indebted for procuring the submarine treasures with which her seas are stored. They are also very frequently employed in the biche de mar or tripang fisheries among the islands to the south. The Bajows generally look upon Macassar as their principal place of resort. They were at one time believed to be derived from Johore, on the Malayan peninsula; at another, to be Buguese; but they speak the Sooloo dialect, and are certainly derived from some of the neighbouring islands. The name of Bajows, in their tongue, means fishermen. From all accounts, they are allowed to pursue their avocations in peace, and are not unfrequently employed by the piratical datus, and made to labour for them. They resort to their fishing-grounds in fleets of between one and two hundred sail, having their wives and children with them, and in consequence of the tyranny of the Sooloos, endeavour to place themselves under the protection of the flag of Holland, by which nation this useful class of people is encouraged. The Sooloo seas are comparatively little frequented by them, as they are unable to dispose of the produce of their fisheries for want of a market, and fear the exactions of the datus. Their prahus are about five tons each. The Bajows at some islands are stationary, but are for the most part constantly changing their ground. The Spanish authorities in the Philippines encourage them, it is said, to frequent their islands, as without them they would derive little benefit from the banks in the neighbouring seas, where quantities of pearl-oysters are known to exist, which produce pearls of the finest kind. The Bajows are inoffensive and very industrious, and in faith Mahomedans.

The climate of Sooloo during our short stay, though warm, was agreeable. The time of our visit was in the dry season, which lasts from October till April, and alternates with the wet one, from May till September. June and July are the windy months, when strong breezes blow from the westward. In the latter part of August and September, strong gales are felt from the south, while in December and January the winds are found to come from the northward; but light winds usually prevail from the southwest during the wet season,

and from the opposite quarter, the dry, following closely the order of the monsoons in the China seas. As to the temperature, the climate is very equable, the thermometer seldom rising above 90° or falling below 70°.

Diseases are few, and those that prevail arise from the manner in which the natives live. They are from that cause an unhealthy-looking race. The small-pox has at various times raged with great violence throughout the group, and they speak of it with great dread. Few of the natives appeared to be marked with it, which may have been owing, perhaps, to their escaping this disorder for some years. Vaccination has not yet been introduced among them, nor have they practised inoculation.

Notwithstanding Soung was once the Mecca of the East, its people have but little zeal for the Mahomedan faith. It was thought at one time that they had almost forgotten its tenets, in consequence of the neglect of all their religious observances. The precepts which they seem to regard most are that of abstaining from swine's flesh, and that of being circumcised. Although polygamy is not interdicted, few even of the datus have more than one wife.

Soung Road offers good anchorage; and supplies of all kinds may be had in abundance. Beef is cheap, and vegetables and fruits at all seasons plenty.

Our observations placed the town in latitude 6° 01′ N., longitude 120° 55′ 51″ E.

On the 6th, having concluded the treaty (a copy of which will be found in Appendix XIII.) and the other business that had taken me to Sooloo, we took our departure for the Straits of Balabac, the western entrance into this sea, with a fine breeze to the eastward. By noon we had reached the group of Pangootaaraang, consisting of five small islands. All of these are low, covered with trees, and without lagoons. They presented a great contrast to Sooloo, which was seen behind us in the distance. The absence of the swell of the ocean in sailing through this sea is striking, and gives the idea of navigating an extensive bay, on whose luxuriant islands no surf breaks. There are, however, sources of danger that incite the navigator to watchfulness and constant anxiety; the hidden shoals and reefs, and the sweep of the tide, which leave him no control over his vessel.

Through the night, which was exceedingly dark, we sounded every twenty minutes, but found no bottom; and at daylight on the 7th, we made the islands of Cagayan Sooloo, in latitude 7° 03′ 30″ N., longitude 118° 37′ E. The tide or current was passing the islands to the west-southwest, three quarters of a mile per hour; we had

soundings of seventy-five fathoms. Cagayan Sooloo has a pleasant appearance from the sea, and may be termed a high island. It is less covered with undergrowth and mangrove-bushes than the neighbouring islands, and the reefs are comparatively small. It has fallen off in importance; and by comparing former accounts with those I received, and from its present aspect, it would seem that it has decreased both in population and products. Its caves formerly supplied a large quantity of edible birds'-nests; large numbers of cattle were to be found upon it; and its cultivation was carried on to some extent. These articles of commerce are not so much attended to at the present time, and the biche de mar and tortoise-shell, formerly brought hither, are now carried to other places. There is a small anchorage on the west side, but we did not visit it. There are no dangers near these small islands that may not be guarded against. Our survey extended only to their size and situation, as I deemed it my duty to devote all the remainder of the time I had to spare to the Straits of Balabac.

After the night set in, we continued sounding every ten minutes, and occasionally got bottom in from thirty to seventy fathoms. At midnight, the water shoaled to twenty fathoms, when I dropped the anchor until daylight. We shortly afterwards had a change of wind, and a heavy squall passed over us.

In the morning we had no shoal ground near us, and the bank on which we had anchored was found to be of small size; it is probable that we had dropped the anchor on the shoalest place. Vessels have nothing to fear in this respect.

At 9 A. M. of the 8th, we made the Mangsee Islands ahead of us, and likewise Balabac to the north, and Balambangan to the south. Several sand-banks and extensive reefs were also seen between them. On seeing the ground on which we had to operate, of which the published charts give no idea whatever, I determined to proceed, and take a central position with the ship under the Mangsee Islands; but in order not to lose time, I hoisted out and dropped two boats, under Lieutenant Perry, to survey the first sand-bank we came to, which lies a few miles to the eastward of these islands, with orders to effect this duty and join me at the anchorage, or find a shelter under the lee of the islands.

At half-past 2 P. M. we anchored near the reef, in thirty-six fathoms water. I thought myself fortunate in getting bottom, as the reefs on closing with them seemed to indicate but little appearance of it.

The rest of the day was spent in preparing the boats for our operations. I now felt the want of the tender. Although in the absence

of this vessel, great exposure was necessary to effect this survey, I found both officers and men cheerful and willing. The parties were organized,—the first to proceed to the north, towards Balabac Island, to survey the intermediate shoals and reefs, under Lieutenant Emmons and Mr. Totten; the second to the south, under Lieutenants Perry and Budd; and Mr. Hammersly for the survey of the shoals of Balambangan and Banguey, and their reefs. The examination of the Mangsee Islands, and the reefs adjacent, with the astronomical and magnetic observations, &c., devolved on myself and those who remained on board the ship.

The weather was watched with anxiety, and turned out disagreeable, heavy showers and strong winds prevailing; notwithstanding, the boats were despatched, after being as well protected against it as possible. We flattered ourselves that these extensive reefs would produce a fine harvest of shells; but, although every exertion was made in the search, we did not add as many to our collections as we anticipated. Some land-shells, however, were found that we little expected to meet with, for many of the trees were covered with them, and on cutting them down, large quantities were easily obtained. Mr. Peale shot several birds, among which was a Nicobar pigeon; some interesting plants and corals were also added. On the island a large quantity of drift-wood was found, which with that which is growing affords ample supplies of fuel for ships. No fresh water is to be had, except by digging, the island being but a few feet above high-water mark.

Although the time was somewhat unfavourable, Lieutenant Emmons and party executed their orders within the time designated, and met with no other obstructions than the inclemency of the weather. This was not, however, the case with Lieutenant Perry, who, near a small beach on the island of Balambangan, encountered some Sooloos, who were disposed to attack him. The natives, no doubt, were under the impression that the boats were from some shipwrecked vessel. They were all well armed, and apparently prepared to take advantage of the party if possible; but, by the prudence and forbearance of this officer, collision was avoided, and his party saved from an attack.

The island of Balambangan was through the instrumentality of Mr. Dalrymple, as heretofore stated, obtained from the Sooloos for a settlement and place of deposit, by the East India Company, who took possession of it in 1773. Its situation off the northern end of Borneo, near the fertile district of that island, its central position, and its two fine ports, offered great advantages for commerce, and for its becoming a great entrepôt for the riches of this archipelago.

Troops, and stores of all kinds, were sent from India; numbers of Chinese and Malays were induced to settle; and Mr. Herbert, one of the council of Bencoolen, was appointed governor. It had been supposed to be a healthy place, as the island was elevated, and therefore probably free from malaria; but in 1775 the native troops from India became much reduced from sickness, and the post consequently much weakened. This, with the absence of the cruisers from the harbour, afforded a favourable opportunity for its capture; and the wealth that it was supposed to contain created an inducement that proved too great for the hordes of marauding pirates to resist. Choosing their time, they rushed upon the sentries, put them to death, took possession of the guns, and turned them against the garrison, only a few of whom made their escape on board of a small vessel. The booty in goods and valuables was said to have been very large, amounting to nearly four hundred thousand pounds sterling.

Although Borneo offers many inducements to commercial enterprise, the policy of the Dutch Company has shut themselves out, as well as others, by interdicting communication. In consequence, except through indirect channels, there has been no information obtained of the singular and unknown inhabitants of its interior. This, however, is not long destined to be the case.

Mr. Brooke, an English gentleman of fortune, has, since our passage through these seas, from philanthropic motives, made an agreement with the rajah of Sarawack, on the northern and western side of Borneo, to cede to him the administration of that portion of the island. This arrangement it is believed the British government will confirm, in which event Sarawack will at once obtain an importance among the foreign colonies, in the Eastern seas, second only to that of Singapore.

The principal inducement that has influenced Mr. Brooke in this undertaking is the interest he feels in the benighted people of the interior, who are known under the name of Dyack, and of whom some extraordinary accounts have been given.

A few of these, which I have procured from reputable sources, I will now relate, in order that it may be seen among what kind of people this gentleman has undertaken to introduce the arts of civilization.

The Dyacks are, by all accounts, a fine race, and much the most numerous of any inhabiting Borneo. They are almost exclusively confined to the interior, where they enjoy a fine climate, and all the spontaneous productions of the tropics. They are believed to be the aborigines of the island. The name of Dyack seems to be more

particularly applied to those who live in the southern section of Borneo. To the north they are called Idaan or Tirun, and those so termed are best known to the Sooloos, or the inhabitants of that part of the coast of Borneo over which the Sooloos rule. In personal appearance, the Dyacks are slender, have higher foreheads than the Malays, and are a finer and much better-looking people. Their hair is long, straight, and coarse, though it is generally cropped short round the head. The females are spoken of as being fair and handsome, and many of those who have been made slaves are to be seen among the Malays.

In manners the Dyacks are described as simple and mild, yet they are characterized by some of the most uncommon and revolting customs of barbarians. Their government is very simple; the elders in each village for the most part rule; but they are said to have chiefs that do not differ from the Malay rajahs. They wear no clothing except the maro, and many of them are tattooed, with a variety of figures, over their body. They live in houses built of wood, that are generally of large size, and frequently contain as many as one hundred persons. These houses are usually built on piles, divided into compartments, and have a kind of veranda in front, which serves as a communication between the several families. The patriarch, or elder, resides in the middle. The houses are entered by ladders, and have doors, but no windows. The villages are protected by a sort of breastwork.

Although this people are to be found throughout all Borneo, and even within a few miles of the coast, yet they do not occupy any part of its shores, which are held by Malays, or Chinese settlers. There is no country more likely to interest the world than Borneo. All accounts speak of vast ruins of temples and palaces, throughout the whole extent of its interior, which the ancestors of the present inhabitants could not have constructed. The great resemblance these bear to those of China and Cambojia has led to the belief that Borneo was formerly peopled by those nations; but all traditions of the origin of these edifices have been lost; and so little is now known of the northern side of Borneo, that it would be presumption to indulge in any surmises of what may have been its state during these dark ages. Even the Bugis priests, who are the best-informed persons in the country, have no writings or traditions that bear upon the subject; and the few scattered legends of Eastern origin, can afford no proof of the occurrence of the events they commemorate in any particular locality.

The accounts of the habits of the Dyacks are discrepant. Some give them credit for being very industrious, while others again speak of them as indolent. They are certainly cultivators of the soil, and

in order to obtain the articles they need, will work assiduously. Many of them are employed in collecting gold-dust, and some in the diamond mines; and they will at times be found procuring gums, rattans, &c., from their native forests for barter. They are a people of great energy of character, and perseverance in the attainment of their object, particularly when on war-parties, or engaged in hunting.

Their food consists of rice, hogs, rats, snakes, monkeys, and many kinds of vermin, with which this country abounds.

Their chief weapon is the parang or heavy knife, somewhat like the kris. It is manufactured of native iron and steel, with which the coast of the country is said to abound. They have a method of working it which renders it unnecessary for them to look to a foreign supply; the only articles of foreign hardware that they are said to desire, are razors, out of which to make their cockspurs. One thing seems strange: although asserted upon good authority, that the iron and steel of the coast are thought to be superior by foreigners, they are not to be compared with that which is found in the interior, and manufactured by the Dyacks. All the best krises used by the Malay rajahs and chiefs, are obtained from the interior. Some of these are exquisitely manufactured, and so hard that, without turning the edge, they cut ordinary wrought iron and steel.

Among their other weapons is the sumpit, a hollow tube, through which they blow poisoned arrows. The latter are of various kinds, and those used in war are dipped in the sap of what the natives term the "upo." The effect of this poison is almost instantaneous, and destroys life in four or five minutes. Those who have seen a wound given accidentally, describe the changes that the poison occasions as plainly perceptible in its progress. Before using the arrow, its poisoned point is dipped in lime-juice to quicken it. The range of the sumpit is from fifty to sixty yards. Although the arrows are poisoned, yet it is said they sometimes eat the game they kill with them, parboiling it before it is roasted, which is thought to extract the poison. Fire-arms, respecting which they have much fear, have not yet been introduced among them; indeed, it is said that so easily are they intimidated by such weapons, that on hearing a report of a gun they invariably run away. Each individual in a host would be impressed with the belief that he was the one that was to be shot.

They address their prayers to the maker of the world, whom they call Dewatta, and this is all the religion they have. There are many animals and birds held by them in high veneration, and they are close observers of the flight of birds, from which they draw prognostics. There is in particular a white-headed eagle or kite, upon whose flight

and cries they put great reliance, and consult them in war or on any particular expedition. For this purpose they draw numbers of them together, and feed them by scattering rice about. It is said their priests consult their entrails also on particular occasions, to endeavour to look into future events.

In the performance of their engagements and oaths, they are most scrupulous. They seem to have some idea of a future life, and that on the road to their elysium they have to pass over a long tree, which requires the assistance of all those they have slain in this world. The abode of happy spirits is supposed to be on the top of Kini Balu, one of their loftiest mountains, and the portals are guarded by a fiery serpent, who does not suffer any virgin to pass into the celestial paradise.

Polygamy does not exist among them, but they have as concubines slaves, who are captured in their wars or rather predatory expeditions. If a wife proves unfaithful to her husband, he kills several of his slaves, or inflicts upon her many blows, and a divorce may be effected by the husband paying her a certain price, and giving up her clothes and ornaments, after which he is at liberty to marry another. The women, however, exercise an extraordinary influence over the men.

But of all their peculiar traits, there is none more strange than the passion they seem to indulge for collecting human heads. These are necessary accompaniments in many transactions of their lives, particularly in their marriages, and no one can marry unless he has a certain number of heads; indeed, those who cannot obtain these are looked upon with disdain by the females. A young man wishing to wed, and making application to marry her for whom he has formed an attachment, repairs with the girl's father to the rajah or chief, who immediately inquires respecting the number of heads he has procured, and generally decides that he ought to obtain one or two more, according to his age, and the number the girl's father may have procured, before he can be accepted. He at once takes his canoe and some trusty followers, and departs on his bloody errand, waylaying the unsuspecting or surprising the defenceless, whose head he immediately cuts off, and then makes a hurried retreat. With this he repairs to the dwelling of his mistress, or sends intelligence of his success before him. On his arrival, he is met by a joyous group of females, who receive him with every demonstration of joy, and gladly accept his ghastly offering.

Various barbarous ceremonies now take place, among which the heads undergo inspection to ascertain if they are fresh; and, in order to prove this, none of the brain must be removed, nor must they have

been submitted to smoke to destroy the smell. After these preliminaries, the family honour of the bride is supposed to be satisfied, and she is not allowed to refuse to marry. A feast is now made, and the couple are seated in the midst naked, holding the bloody heads, when handfuls of rice are thrown over them, with prayers that they may be happy and fruitful. After this, the bridegroom repairs in state to the house of the bride, where he is received at the door by one of her friends, who sprinkles him with the blood of a cock, and her with that of a hen. This completes the affair, and they are man and wife.

Funerals are likewise consecrated by similar offerings, the corpse remaining in the house until a slave can be procured, by purchase or otherwise, whom they design to behead at the time the body is burnt. This is done in order that the defunct may be attended by a slave on his way to the other world or realms of bliss. After being burnt, the ashes of the deceased are gathered in an urn, and the head of the slave preserved and placed near it.

In some parts, a rajah or chief is buried with great pomp in his war habiliments, and food and his arms are placed at his side. A mound is erected over him, which is encircled with a bamboo fence, upon which a number of fresh heads are stuck, all the warriors who have been attached to him bringing them as the most acceptable offering; and subsequently these horrid offerings are renewed.

The Dyacks are found also on the island of Celebes, but there, as in Borneo, they are confined to the interior. I have already mentioned that they were supposed to have been the original inhabitants of the Sooloo Archipelago. The Sooloos speak of the country of the Dyacks as being exceedingly fertile and capable of producing every thing. The north end of Borneo is particularly valuable, as its produce is easily transported from the interior, where much of the land is cultivated. I have obtained much more information in relation to this people, in a variety of ways, from individuals as well as from the published accounts, which are to be found at times in the Eastern prints; but as this digression has already extended to a great length, I trust that enough has been said to enable the reader to contrast it with the natives who inhabit the islands that dot the vast Pacific Ocean, and to make him look forward with interest to the developements that the philanthropic exertions of Mr. Brooke may bring to light.

Having completed our duties here, the boats were hoisted in, after despatching one to leave orders for Mr. Knox of the Flying-Fish, in a bottle tied to a flag-staff.

On the afternoon of the 12th, we got under way to proceed direct to Singapore, and passed through the channel between the reef off the

Mangsee Islands, and those of Balambangan and Banguey. We found this channel clear, and all the dangers well defined.

As the principal objects of my visit were to ascertain the disposition and resources of the Sooloos for trade, and to examine the straits leading into the Sooloo seas, in order to facilitate the communication with China, by avoiding on the one hand the eastern route, and on the other the dangers of the Palawan Passage, it may be as well to give the result of the latter inquiry, referring those who may be more particularly interested to the Hydrographical Atlas and Memoir.

The difficulties in the Palawan Passage arising from heavy seas and fresh gales do not exist in the Sooloo Sea, nor are the shoals so numerous or so dangerous. In the place of storms and rough water, smooth seas are found, and for most of the time moderate breezes, which do not subject a vessel to the wear and tear experienced in beating up against a monsoon.

The Straits of Balabac may be easily reached, either from Singapore, or by beating up along the western shore of Borneo. When the straits are reached, a vessel by choosing her time may easily pass through them by daylight, even by beating when the wind is ahead. Once through, the way is clear, with the exception of a few coral lumps; the occasional occurrence of the north wind will enable a vessel to pass directly to the shores of the island of Panay. A fair wind will ordinarily prevail along that island, and, as I have already mentioned, it may be approached closely. The passage through to the eastward of Mindoro Island may be taken in preference to that on the west side through the Mindoro Strait, and thus all the reefs and shoals will be avoided. Thence, the western coast of Luzon will be followed to the north, as in the old route.

I do not think it necessary to point out any particular route through the Sooloo Sea, as vessels must be guided chiefly as the winds blow, but I would generally avoid approaching the Sooloo Islands, as the currents are more rapid, and set rather to the southward. Wherever there is anchorage, it would be advisable to anchor at night, as much time might thus be saved, and a knowledge of the currents or sets of the tides obtained. Perhaps it would be as well to caution those who are venturesome, that it is necessary to keep a good look-out, and those who are timid, that there does not appear to be much danger from the piratical prahus, unless a vessel gets on shore: in that case it will not be long before they will be seen collecting in the horizon in large numbers.

The treaty that I made with the Sultan, if strictly enforced on the first infraction, will soon put an end to all the dangers to be appre-

hended from them. To conclude, I am satisfied that under ordinary circumstances, to pass through the Sooloo Sea will shorten by several days the passage to Manilla or Canton, and be a great saving of expense in the wear and tear of a ship and her canvass.

On the 13th, we passed near the location of the Viper Shoal, but saw nothing of it. It is, therefore, marked doubtful on the chart. As I had but little time to spare, the look-outs were doubled, and we pursued our course throughout the night, sounding as we went every fifteen minutes; but nothing met our view.

On the 14th, although we had the northeast monsoon blowing fresh, we experienced a current of twenty-two miles setting to the north. This was an unexpected result, as the currents are usually supposed to prevail in the direction of the monsoon. On the 15th, we still experienced it, though not over fifteen miles. On the 16th, we found it setting west, and as we approached the Malayan Peninsula it was found to be running southwest.

On the 18th, we made Pulo Aor and Pulo Pedang, and arriving off the Straits of Singapore I hove-to, to await daylight. In the morning at dawn, we found ourselves in close company with a Chinese junk. The 19th, until late in the afternoon, we were in the Singapore Straits, making but slow progress towards this emporium of the East. The number of native as well as foreign vessels which we passed, proved that we were approaching some great mart, and at 5 P. M. we dropped our anchor in Singapore Roads. Here we found the Porpoise, Oregon, and Flying-Fish, all well: the two former had arrived on the 22d of January, nearly a month before, and the latter three days previously. Before concluding this chapter, I shall revert to their proceedings since our separation off the Sandwich Islands.

The instructions to the brigs have been heretofore given; but it may not be amiss to repeat here that the object in detaching them was, that they might explore the line of reefs and islands known to exist to the northward and westward of the Hawaiian Group, and thence continue their course towards the coast of Japan. Had they effected the latter object, it would have given important results in relation to the force of the currents, and the temperature of the water. It was desirable, if possible, to ascertain with certainty the existence on the coast of Japan of a current similar to the Gulf Stream, to which my attention had been particularly drawn.

The first land they made was on the 1st of December, 1841, and was Necker Island. Birds, especially the white tern, had been seen in numbers prior to its announcement. Necker Island is apparently a mass of volcanic rocks, about three hundred feet high, and is destitute

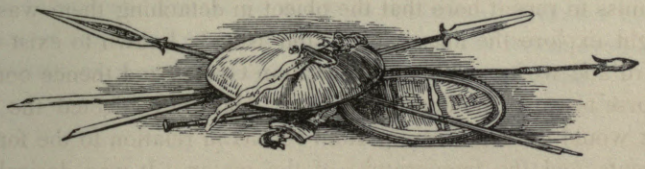
of any kind of vegetation, but covered with guano. It is surrounded by a reef, three miles from which soundings were obtained, in twenty fathoms water. The furious surf that was beating on all sides of the island, precluded all possibility of a landing being made. By the connected observations of the vessels it lies in longitude 164° 37′ W., and latitude 23° 44′ N.

The French-Frigate Shoal was seen on the 3d; the weather proved bad, and they were unable to execute the work of examining this reef. The sea was breaking furiously upon it.

On the 7th, the Maro Reef was made in latitude 25° 24′ 29″ N., longitude 170° 43′ 24″ W. Bottom was found at a distance of four miles from the reef, with forty-five fathoms of line. On the 8th, they passed over the site of Neva Isle, as laid down by Arrowsmith, but no indications of land were seen.

On the 11th, Lieutenant-Commandant Ringgold determined, on account of the condition of the brigs, and the continuance of bad weather, it was impossible to keep their course to the northward and westward towards the coast of Japan: he therefore hauled to the southward, which was much to be regretted, and followed so very nearly in the same track as that pursued by the Vincennes, towards the China seas, that nothing new was elicited by them.

After a passage of fifty-six days from the Sandwich Islands, they dropped their anchors in Singapore on the 19th of January, 1842, all well. Here they found the United States ship Constellation, Commodore Kearney, and the sloop of war Boston, Captain Long, forming the East India squadron.



SOOLOO ARMS.

CHAPTER X.

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Drawn by A. T. Agate

J. A. Ralph Sc.

CHAPTER X.

SINGAPORE.

1842.

On drawing near to Singapore, as has already been remarked, it became evident that we were approaching a great mart of Eastern commerce. If this be apparent when merely approaching that place, the impression becomes far more striking on anchoring in the roadstead, for there we found a collection of shipping, of various sizes, from the tiny cockboat to the stately and well-formed Indiaman.

The shipping are contrasted not only in size, but in rig and form, from the vast hulk-like junk to the light and skipping sampan;* and many of them were of kinds entirely new to us. Not only were a great part of the vessels of a novel description, but their national flags were equally strange. Many of the latter were now seen by us for the first time, and were displayed in various ways; some flew at each masthead, others floated from horizontal yards, while the more civilized nations were distinguished by ensigns pendent from the peak.

The variety in the style of paint and ornament was equally great. The Chinese junks exhibited their arched sides painted in curved streaks of red, yellow, and white; the Siamese ships, half European in structure and model, showed huge carved sterns; and these were contrasted with the long, low, and dark hulls of the prahus and the opium-smuggler. The two latter classes perhaps excited the greatest attention, in consequence of the war they are continually carrying on against the property and lives, as well as the morals and laws, of the natives of the surrounding countries.

* The sampan is a light and easy-pulling boat, used at Singapore to carry passengers to and from the shipping in the roads.

It is difficult to estimate the average number of vessels that are to be seen in the roads of Singapore; for on some days they appear crowded, while on others they are comparatively empty. While many vessels are continually arriving and departing, the Chinese junks alone appear as fixtures; more than fifty of them were counted, with sails unbent, yards housed, and rudders unhung, in which state they resemble floating shops, wherein are offered for sale assortments of every article produced or manufactured in the Celestial Empire; samples of which, by way of sign, are to be seen hanging about them in all directions. These junks make no more than one voyage a year, performing their passage in either direction during the favouring monsoon.

Unlike other ports, the water presents at first so many objects to attract the attention, that the land and town remain unnoticed until the curiosity in relation to those which are afloat is satisfied. On turning to view the town, its situation appears to be low, as well as that of the island on which it is built. The highest point of the latter is not more than five hundred feet above the level of the sea, and even this elevation is distant, so that there is nothing to render the scenery picturesque, nor has it much of the character that is styled Oriental. The distant jungle, however, relieved by the white portions of buildings in the European style, furnishes a landscape pleasing to the eye. These buildings seem to be upon the very beach, while a hill in the rear is crowned by the dwelling of the governor, near which is the flag-staff. The intervening space is filled with buildings, whose style holds an intermediate place between that of Europe, and that of the Chinese and Malays, neither of which predominates so much as to give its distinctive character to the scene.

The stranger, after anchoring in the roads, is not long before he discovers the point at which the river discharges itself; for one continued stream of boats, sampans, and prahus, is seen tending to a point in the beach, where the entrance is partly concealed from view; neither can he be long ignorant how large a concourse of various races is here assembled. Our ship was crowded from an early hour, with tailors, shoemakers, washerwomen, and venders of curiosities. The latter brought shells, birds of paradise, monkeys, parrots, corals, and mats. Without board there were innumerable bumboats, bringing for sale fresh bread, eggs, milk, chickens and ducks, both alive and cooked, fish, fruit, and vegetables. All sued piteously for permission to come alongside, and made a prodigious clatter. The features, dress, and language of the venders were as various as the articles they had to sell; and they agreed only in the common character of a dark skin.

The specimen thus presented of the population of Singapore prepared us for the sight of the motley group we were to meet on shore.

At Singapore I had the pleasure of renewing my acquaintance with Mr. Balestier, our worthy consul. To him, his lady, and his son, we are under many obligations for their kind treatment and attention. Mr. Balestier is so well known among men of science in the United States, it would be needless for me to say that from him I derived much interesting information relative to the place, its commerce, &c., for which I here offer my acknowledgments. He was extensively engaged in the cultivation of sugar, on a plantation of one thousand acres, within two miles of Singapore, nearly half of which was under cultivation. This extent of ground he has by his exertions reclaimed from the jungle, and it bids fair to repay the labour and expense he has incurred in clearing and bringing it into cultivation. He is the first person who has attempted the cultivation of sugar at Singapore, and for his success he was awarded the gold medal of the Calcutta Agricultural Society.

As we passed through the vessels with which the roads were crowded on our way to the shore, the hum of voices was plainly audible, particularly from the Chinese junks, which seemed not unlike a human hive. On reaching the mouth of the river, as was to be expected, the crowd thickened, and the way became more and more obstructed, until we were fairly jammed among the sampans, with their crowded population. The river does not exceed two hundred and fifty feet in width. It is shallow at its mouth, and passes through the centre, or rather divides the old from the new town; these are connected by a wooden bridge. As far up as the bridge, which is about one-third of a mile from the entrance, the river is of various widths, and its banks have been carefully built up with stone, having steps occasionally for the convenience of landing from the boats. A large population is on the river, dwelling in the sampans, which are all crowded with men, women, and children, the latter naked, and frolicking in and out of the water at pleasure. These boats are ranged in rows on each side of the passage towards the bridge, and are confined by stakes stuck in the bottom. As may be well imagined, there are frequent accidents and misadventures, that call for the exercise of the lungs of this crowded multitude, yet during the many opportunities I had of viewing them, both by day and night, I have seldom seen a set of people apparently so contented.

We landed at the bridge, near which is the office of our consul, in a large quadrangular building, one side of which faces the river. The terms of old and new town promise a difference of architecture

as well as inhabitants, which they amply fulfil. The former occupies the southwest or left-hand side of the river, and exhibits along the quay a fine row of stuccoed or chunamed warehouses. The lower story of the greater part of these is an arcade supported by pillars at short distances. They are only two stories high, devoid of architectural ornament, but are convenient buildings for the trade. On the right are to be seen the buildings appropriated to the government offices. These are situated on an extensive parade-ground, studded with a few fine trees. The houses having extensive porticoes, and being adorned with flowers in large vases, have rather an elegant appearance, but this is in part dissipated on a nearer approach. They are usually enclosed with low walls, surmounted by iron railings, within which are small flower-gardens, that do not, however, display much taste.

The bridge which connects the two towns is by far the most attractive place in Singapore, for the constant passing and repassing across this thoroughfare makes it particularly amusing to a stranger. The consul's rooms were so situated as to command a free view of this moving panorama. The number of Asiatic nations that frequent Singapore is said to be twenty-four, consisting of Chinese, Hindoos, Malays, Jews, Armenians, Parsees, Bugists, besides Europeans. The variety of costume exhibited may therefore be easily imagined, and afforded opportunities for inquiry as well as amusement. The bridge was particularly thronged during the first day of our visit, for it was a holiday, both with the Chinese and Mahomedans of Hindoostan.

The trades, as is usual in the East, are carried on in the streets, and carpenters, blacksmiths, tinners, butchers, bakers, tailors, barbers, crockery and opium sellers, and coffin-makers, are to be met in succession. Money-changers are to be found here and there, and large well-supplied shops are not wanting, although their narrow and contracted fronts give no reason to anticipate their existence. That of Whampoa, our comprador, was one of the largest, and it gave a better idea of Noah's ark than of any thing else, presenting a mixture of living animals, with every thing that is required for the artificial wants of the shipping. In front were all the varieties of ship stores that China and Europe could furnish; and in the rear were poultry, pigs, sheep, and pigeons, in pens and cages, with various parrots, cockatoos, and monkeys, while quantities of geese and ducks were accommodated beneath with pools of water. Between the live-stock and the groceries were large quantities of vegetables and fruit, besides lots of bread, flour, and dough ready for the oven. The noise occasioned by the cackling, bellowing, crowing, and bleating, with

the accumulation of filth, surprised as well as disgusted; for although it was reached at every tide by the water, yet there was ample necessity for the use of brooms and shovels. The Chinese, though cleanly in their persons, are far from being so in their general habits, if we may judge from those that I have met in the places we have visited.

On landing, that which impresses a stranger most strongly, is the great variety both of costume and of race. Almost every person that is encountered appears different from his predecessor, so that it is some time before it can be decided which nation predominates; but on reaching the old town, this is no longer doubtful, for the Chinese are soon found to be the most numerous.

The variety of religious sects also soon become evident. All have their places of worship, and enjoy the free exercise of their religion, so that in passing around, the mosque of the Mahomedan, the temple of the Chinese, and the churches of various Christian sects, are met with in their turn.

The number of spoken languages is such as to recall the idea of Babel, and to excite a desire to learn the cause of such a collection of nations. This is partly to be found in the favourable commercial site of Singapore, on the great highway between the Eastern and Western nations, and in the protection afforded to all by its being under a European power, but chiefly in the fact of its being a free port, in every sense of the word. All are allowed to visit it without any question being asked; pirates of any nation may refit here, and no doubt frequently do, without any molestation, so long as they keep the peace.

I was much struck with the apparent absence of either police or military force; but after some inquiry, I was satisfied, by the order and general quiet of the multitude, that there must be a controlling power within reach, and found the policemen under the semblance of Persians, easily distinguishable by their neat and cleanly appearance. They are generally better dressed than the body of the inhabitants, and are to be known by their red and black sashes, and turbaned heads. Without the precincts of the town, a regiment of Sepoys, six hundred strong, and officered by Europeans, is stationed. These are to be seen habited like English soldiers, in close-bodied red coats, than which a more inappropriate dress in such a climate as this can scarcely be imagined.

Before proceeding with the description of Singapore, it will be as well to give some account of its settlement and progress to its present prosperous condition.

It appears that the idea of occupying a position in the Straits of Malacca did not occur to the East India Company until they were

about restoring the possession of Malacca to Holland in 1818. Major Farquhar, then resident at Malacca, in that year entered into a commercial treaty with Abdulrahman Shah, who had been acknowledged as sovereign of Johore by the Dutch. By this treaty, British subjects, or persons under the protection of the Company, had equal rights for commercial pursuits with the most favoured nation, in the ports of Johore, Lingin, and Rhio.

The Dutch had no sooner got possession of Malacca, and received information of Major Farquhar's treaty, than they sent an overpowering force to Rhio, where Abdulrahman resided; declared him their vassal, annulled the treaty made with the English resident, and dictated another with the sultan, by which British commerce was entirely excluded from the ports of the straits.

In order to counteract this attempt upon the part of Holland to keep exclusive possession of the only passes into the Chinese seas, the Straits of Sunda and Malacca, the Marquis of Hastings, who was then Governor-General of India, despatched Sir Stamford Raffles to the Straits of Malacca, to ascertain if there were not a place at the Carimon Isles, or Singapore, of which the Dutch had not possession, suitable for the establishment of a factory; and in this duty Major Farquhar was associated with him.

On the arrival of Sir Stamford Raffles, he found that the Dutch had taken possession of Rhio, as before mentioned; and it was then suggested by Captain Ross, the able surveyor in the Company's employ, that Singapore offered the most suitable location for their purpose. About this time, Sir Stamford Raffles, while off this place, was visited by the Tumungong of Johore, a chief hostile to the Dutch, and an enemy to Abdulrahman Shah. The Tumungong represented that the rightful heir was the elder brother, Hassain Mahomed Shah, and that the British by treating with him would derive a right to settle from the legitimate authority. Sir Stamford saw the force of this advice, and determined at once to treat for the occupation of the island of Singapore with Hassain Mahomed. As a preliminary to this, the recognition of Mahomed Shah as sultan, by two great officers of the empire, was necessary. The Bandahara of Pahang, and the Tumungong of Johore, were selected for this purpose, and when this preliminary had been arranged, Hussain Shah was invited over from Rhio, installed, and recognised. The commissioners at once treated with him as the lawful sovereign of Johore, for the cession and immediate settlement of Singapore. This was one of the wise arrangements entered into by that intelligent officer, who so long and so satisfactorily ruled over Java. The treaty, from the hurry in which it was drawn up, was

found to have circumscribed the limits of the ceded district to but a small portion of the south coast of the island, and the jurisdiction to extend only as far as a cannon-shot into the interior immediately around the factory. This limit continued until 1824, when a cession of the entire island was obtained, and a treaty of alliance and friendship was concluded between the Company and the Sultan. The jurisdiction was also for ever ceded to the Company of the seas and islands within ten geographical miles of the coast of Singapore. In consideration of these concessions, the Company gave the Sultan thirty-three thousand dollars, with an annuity of fifteen thousand, and to the Tumungong twenty-six thousand dollars, and an annuity of eight thousand. The annuities were to be paid monthly; and it was farther agreed, that if the Sultan or the Tumungong desired to remove at any time from the island of Singapore to other parts of their dominions, they should be entitled to the further sum of ten and fifteen thousand dollars, for all their right and title to any immovable property they might possess.

This treaty secured free commercial intercourse for both parties, with perfect neutrality in all respects, and freedom from offensive and defensive alliances. Under this tenure Singapore is now held.

Singapore being the only free port in this part of the world, soon attracted to it all the surrounding nations, not only on account of the absence of duties, or of any regulations impeding trade, but as offering a mart where they could with ease dispose of their goods, and obtain supplies. Many of the most opulent merchants of the East have settled here, and the Chinese in particular have found it to afford a suitable field for the exercise of their trades.

The jurisdiction of Singapore, or the "Straits Government," as it is here called, embraces Malacca and Prince of Wales Island. The office of governor was filled during our visit, by Samuel George Bonham, Esq., whose usual residence is at Singapore, but I had not the pleasure of seeing him, as he was absent on a tour of duty. A steamer is attached to this service, and enables the governor to communicate freely with the three ports. At each port there is a recorder's court, for the trial of offences, and the settlement of commercial difficulties. A chief justice, who resides at Singapore, is the principal law officer for criminal offences, and is appointed by the crown. Capital punishment is referred for approval to the authorities at home.

By the treaty of 1824, the Dutch gave up Malacca, which had become useless to them, and the English bound themselves not to make settlements on any of the islands to the south of it. This was certainly a very unwise covenant on the part of Great Britain, and

showed great want of knowledge respecting the resources and geographical position of the various islands.

This false step has been prejudicial to the interests of Great Britain, and has entailed upon the fine islands of Borneo, Celebes, Banca, &c., the benighted policy that has so long been pursued by Holland. Banca, from which England has thus excluded herself, by all accounts is said to possess the best tin mines in the world. In this treaty of March, 1824, signed at London, it was mutually agreed that piracy should be extirpated from the Eastern seas; but the practice has probably existed to full as great if not greater extent in the few years that have since elapsed, as at any previous epoch.

It cannot but appear evident that the political relations with Holland, which have existed, and still continue to exist, in these islands, have had little effect in improving the state of civilization; for although that nation has been in possession of power for nearly two hundred years, yet the natives of the several islands are not found to be more advanced in the arts or sciences, nor their comforts or conveniences of life in any degree improved by its influence, although thousands of Europeans have grown rich upon their labours. This is no doubt one of the usual effects of a monopoly; and these islands, which are blessed with all the abundance of God's providence, have by the grasping hand of avarice been impoverished, and made the seat of bloodshed and want. Slavery is as prevalent, and as openly countenanced, as on their being first taken possession of. It would be difficult for any one to point out what good the policy of Europe in the East has brought upon the islanders, in return for the riches that have been derived from them.

It might be expected that English law and English justice would exist at a place where the authority of Great Britain avowedly exists, and over which its flag waves; but this is not the case in Singapore. No rights of property in the soil are acknowledged; no security and no redress are to be had against the will of the public officer. He may tear down a resident's house, and there is no preventive for the wrong. Instances have occurred where the very soil has been dug off a garden by his order, and against the wishes and consent of the owner, because it so pleased the dignitary to will that it should be level with the street, which had been graded a foot or two below the level. On expostulation and inquiry, no redress would be given, or damages allowed. Fortunately, neither the land nor building is of great value, for a hundred dollars in Singapore would go as far in the construction of a building as a thousand with us.

Of the society we saw but little; what we did see appeared to be

sociable and agreeable, but is necessarily small, being confined to but sixty or seventy individuals.

The island of Singapore is composed of red clay, sandstone, and in some places granite. The locality of the town appears to have been a salt-marsh, with a narrow strip of rocks and sand near the beach. In consequence of its rapid increase, they are beginning now to fill up the low ground with the surplus earth taken from the surrounding hills.

The highest point of Singapore is called Buhit Tima, and does not exceed, it is said, five hundred feet in elevation. Although this height is but seven miles distant from the town, I was told it has never yet been visited by a European and seldom by natives, on account of the obstructed nature of the intervening country; there are a few small fishing or piratical establishments (the two names are synonymous here, for when the people are not engaged in the one, they are in the other), on the north and west end of the island. The length of the island is twenty-seven miles, and its greatest breadth is fifteen. It is divided from the peninsula by the old strait of Singapore, so long followed by navigators, for reasons it is now difficult to surmise, when the short, wide, and safe channel was open to them, which is now altogether used.

The botany of Singapore is far from being thoroughly known, notwithstanding so many scientific expeditions have visited it; nor is it likely to become so very soon, infested as the woods are with tigers. It is remarkable that before the island was inhabited, tigers did not exist in it, although there were great numbers of them in the peninsula opposite; and it is said that they have only made their appearance here within the last six or seven years. Indeed, one of the reasons assigned for its selection, was the absence of this ferocious animal, and of the wild elephant. It is to be presumed, therefore, that the tigers come in search of food, by swimming over the narrow straits. Some fifty persons have been killed by them within the last two years, within two miles of the centre of the town, and two hundred in all are reported as having become victims to these beasts. Criminals and thieves were formerly in the habit of escaping to the woods or jungle, but of late years this has not been attempted by them.

The government, in consequence of the attacks of tigers becoming so frequent, and of the jungle being so much infested by them, offered a premium of one hundred dollars for every tiger's head that should be brought in. This induced large parties to hunt them; but, since the government have reduced the reward to fifty dollars, this daring business has not been followed; not, however, from any scarcity of

the animals, for they now frequently seize men working in the immediate vicinity, but because the sum is too small to be an equivalent for the risk and trouble. From a stuffed specimen we saw at Singapore, it would appear that these animals do not differ from those of Bengal.

While walking with Mr. Balestier around his plantation, he pointed out to us the spot where two of his men had been killed by tigers, and he said it was no uncommon thing, when he first began his plantation, to see the tracks of tigers about his house in the morning. Since the jungle has been cut away to a greater distance, this occurrence is not so frequent. Tigers have been known to attack persons in the daytime, but they seldom frequent the highroad. It is considered too dangerous for an individual to venture near the jungle.

Some accounts speak of vestiges of the primitive inhabitants of Singapore, consisting of mounds, temples, &c., but I could not get at any well-authenticated account of them. Some, indeed, suppose that the island of Singapore may contain many remains of a former race, but there seems to be little or no foundation at present for such an opinion.

Although it was impossible from the number of tigers for our gentlemen to frequent the woods to any great extent, yet many very interesting plants were procured here. Through the kindness of Mr. Balestier, Captain Scott, (the captain of the port,) and others, Mr. Brackenridge obtained many live plants, which we succeeded in bringing safely to the United States.

The soil of the island is a stiff yellow loam, in which the nutmeg, coffee, black pepper, chocolate, and gamboge, (Garcinia,) grow to a great extent. The three first appear to be particularly well adapted to the climate and soil. As I have before mentioned, the cultivation of sugar is attended with success. Captain Scott is planting the durian, which, independently of its fruit, yields a timber highly valued for ship-building. This gentleman has left numerous forest trees standing on his plantation, many of which are of large dimensions, being full one hundred feet in height. These consisted chiefly of species of Quercus, Myrtaceæ, Melastomaceæ, and Rubiaceæ. The undergrowth is almost impenetrable, on account of the vast number of creeping plants which intertwine and clasp around the trees. Two species of Nepenthe (pitcher-plants) were found in the swamp, which were preserved and brought to the United States. The Botanical Report will embrace many more varieties, and to this I must refer the reader for further information.

Fruit seemed to be very abundant, and it is said, that there are one hundred and twenty kinds that can be served as a dessert: among

these are pine-apples, mangosteens, melons, bananas, oranges, &c. The pine-apples are remarkably fine, and not in the least acid; in proof of which, they do not turn the knife black in cutting them, and to eat them is considered wholesome at all hours. The season for this fruit was just coming in at the time of our arrival, and large boat-loads were seen lying at the quay. They are usually planted along the roadside, and though, when small, rather stiff-looking, yet when full-grown and in bearing, they are a pretty object. Of all the plants we saw, the nutmeg requires and receives the greatest care. The trees are planted in orchards, and while young have a sort of arbour erected over them, to protect them from the vertical rays of the sun.

The gambeer (Nauclea) also claims much of the attention of the cultivator: it is a low-sized tree, or bush, of no beauty. Its bark is used for tanning, and it is said to be the most powerful astringent known for this purpose. It is to be seen in the shops in the form of a powder, of a reddish brown colour. We did not learn how this was prepared, or how it was used: it appears, however, to be in great demand. It is occasionally used by the Chinese, with their betel-nut, of which there is a great consumption here, although it is not sold in the streets, as at Manilla; but quantities of the nuts are seen for sale in the market. From the leaves also a powerful astringent is obtained by boiling.

The gamboge tree is also cultivated here, but more extensively on the shores of the straits than at Singapore, and is a very considerable article of trade.

The ride outside of the town to the hills is pleasant, passing through plantations loaded with fruit, and the air at an early hour of the morning is filled with a spicy fragrance. The vivid green of the woods and grass is also remarkable, and continues throughout the whole year, for scarcely a day passes but a refreshing shower falls. The roads are thus kept free from dust, and at all times in good order. The usual mode of conveyance is in a palanquin, which is capable of containing two persons. The cooley, or Hindoo who attends his horse, usually runs by the side of the palanquin, and seldom tires. The charge for one of these conveyances is a dollar, whether for a whole or a part of a day, and a douceur is paid to the cooley according to the time he has been employed. The palanquin is a very convenient vehicle, and its use is absolutely necessary during the heat of the day, to shield the stranger from the burning rays of the sun. These cooleys will run all day through it without any inconvenience. They are principally from the neighbourhood of Madras, and are generally about the middle size, thin, and muscular.

I have mentioned that on our arrival, the whole of this motley population seemed engaged in a festival. With the Chinese it was that of the New Year, and with the Hindoo Mussulman the feast called "Marama," or the search for and finding of the grandchildren of Mohamed. The Chinese, on such occasions, give themselves up entirely to gambling; and the first day and night I was on shore, this part of the town might be considered as a vast gambling-shop. During this holiday they are allowed to gamble as much as they please, but what restriction is put upon the open indulgence of gaming at other times, I did not learn, but from appearances I should suppose it was not very severe.

The extent to which gaming was carried by the Chinese, could not fail to astonish any one who had not been brought up to it. It was extraordinary to see all engaged in such an exciting vice; and to watch the different individuals was amusing. Gaming was going on in every shop, and frequently in each particular corner, under the colonnades, in the bazaars, and at the corner of almost every street a variety of games were playing. Of several of these I had no knowledge; some were performed with cards, and others with dice. The stake seemed generally to be in small copper coin, called pice, about five hundred to the dollar, each of which is valued at three cowries; but although this was the usual betting coin, the stake was sometimes silver, and at times to a considerable amount. Those who have not seen the Chinese play, have never witnessed the spirit of gambling at its height; their whole soul is staked with their money, however small it may be in amount, and they appeared to me to go as earnestly to work as if it had been for the safety of their lives and fortunes.

Almost every one has formed to himself an idea of a Chinese; but to be well known, he requires to be seen on his own soil, or where he is in intercourse with his countrymen. The different individuals of this race seemed to us to have a strong resemblance to each other, and although this may in part be owing to similarity of dress, it is also due to their bodily conformation. The flat chest, in particular, is peculiar, at least to the labouring class. All of them seem active and attentive to their business, of whatever kind it may be, and as far as outward expression and action go, as harmless as lambs. It is somewhat remarkable, that the very sign which was put upon them by their Tartar conquerors to mark them as a subdued race, should now have become their national boast; for nothing seems to claim a Chinaman's attention so much as his long queue, and the longer and blacker it is the more it appears to claim his admiration. We frequently saw it touching the very heels, and tied at the end neatly with a bit of riband.

On great occasions this hangs down to its full length; but at other times, being somewhat in the way, it is wound up on the back of the head. I have heard it asserted, that the Chinese never become bald or gray; but this opinion seemed to be erroneous, from what I saw in this small community.

The Chinese is at all times to be found industriously employed, except when gambling; and were it not for this latter propensity, and his desire of cheating foreigners, has probably as few vices as exist in any other race. Wherever he is found, peace and quietness seem to dwell; he moves, and has been moving for ages in the same path, and prefers all his own ways to those of the rest of the world. We saw the Chinese in some pleasing lights, and were much struck, on these festival occasions, by their attention towards their children, and the fondness and invariable kindness with which they were treated.

Besides their seasons of festivity, it appeared that their devotion at their temples, or josh-houses, claimed some of their time; and we had an opportunity of visiting the interior of one of these. The opposite plate, from a drawing made by Mr. Agate, will give a good idea of its exterior; but to give it full effect, it wants the accompaniment of the moving throng, and the peculiar feelings that one experiences when surrounded with the motley groups of the East. This temple is built near the water, of granite, brought from China, and is a conspicuous object in the landscape. The columns in front are curiously sculptured. The interior combines both the ludicrous and hideous. Its interior may be said to consist of a central building, in which the principal idols are: this is surrounded by a neatly-paved passage, which is uncovered; in the centre are seats appropriated to the worshippers. The inner temple was called by our cicerone, who was apparently on guard, the great temple. It is occupied by three colossal carved wooden idols, representations of the human form, about ten feet high, and in a sitting posture. One of these, that had a long black beard and mustaches, was richly clothed, and painted red, with much tinsel and gilding round the head. This idol was named "Rajerman." In front of him was a female figure, of smaller size, richly dressed, who received from our cicerone the name of "Beebee." The two other figures were equal in size to the first, and as contemptible in carving. Indeed there is not a ship-carver in our country, who would not execute a better piece of statuary. In front of the figures was an altar-table, on which was a smaller one, and on the latter there were coloured wax candles and josh-sticks burning. Some of these were made of tightly-rolled gilt paper, that had been lighted by the worshippers who had been there before us; some flowers were also seen on the altar-tables. At the

side of each of these altars were placed figures of frightful and hideous-looking monsters, with black faces, misshapen bodies and legs, and mouths from ear to ear, filled with enormous teeth. One hand was armed with a battle-axe, and the other pointed to the table. These our cicerone called "Fellow Seegurmain." There were several of the same kind of figures, though of much smaller size, hideous enough to put one out of all conceit even with what was well carved; for the Chinese excel in depicting dragons and reptiles, which are occasionally, if not well grouped, amusingly so, with both men and animals. I was surprised to observe how little respect was paid to the place, which was every where accessible; and with the laughing and talking of those present, and the noise of workmen, it had the air of any thing but a sacred enclosure. The part that was uncovered was ornamented with flowers in pots, consisting of camelias, tuberoses, &c. There were also several old stumps, of the purpose of which I could get no explanation, nor learn why they should be considered so sacred as to be admitted into the temple. Notwithstanding these incongruities, the whole had a striking and singular effect, and I may add, not an unpleasing one.

Before ceasing to speak of the Chinese, I shall give a brief description of their mode of celebrating the New Year, although it was difficult to follow it, and still more so to understand its full meaning. The ceremonies consisted chiefly of processions, both by night and day, in which the whole Chinese population seemed to be engaged. The grand one bore a sort of silken temple, which was carried on the shoulders of several men, with banners before and behind it, having Chinese characters on them, and of the most gaudy colours. These were preceded by music, if such it could be called, consisting of cymbals and gongs, on which every performer strove to strike with his utmost force, and, if possible, oftener than his neighbour. Noise they at least created in perfection. This procession was occasionally joined by smaller ones, and the whole seemed to afford both to the crowd and actors as much amusement as it did to us, to whom it was altogether new. During the night, and particularly on that of the 21st of February, the last day of their year, the illuminated processions were curious, as well as amusing, and were exceedingly numerous. Some of them were to be seen in every street at the same time, and no sooner had one passed than others were seen to follow, all hurrying along as if there were some goal to be reached. The illumination proceeded from lanterns of all colours, sizes, and shapes. We saw also the procession of juvenile horsemen, consisting altogether of children. Each of them bore the fore and hind parts of a horse in such a manner that the child repre-

sented the rider. These mimic portions of the quadruped were made of paper, and illuminated. The effect was that of a miniature regiment of cavalry. Others were represented as if on the backs of fish, that seemed to swim along in the crowd. Some of the children were not more than two years of age, and the oldest not more than five or six. They were all fantastically dressed, and some among them in European costume, which had a grotesque effect among the more appropriate dresses of the East. They were led about, preceded by music, such as it was, of gongs and cymbals; and all passed by on a dog-trot. Towards the close of the evening, some of the children had attendants on each side, who carried the poor little fatigued creatures along, many of whom were nearly, if not quite asleep. Whenever this procession halted, the Chinese would load them with cakes and dulces, and showed a kindness and attention truly pleasing. The most extraordinary exhibition of the evening was an immense illuminated sea-serpent, which we all thought fully equalled, in size and movement, the famous New England one, and agreed in other respects tolerably well with its description, for he had at intervals large bumps of the shape of a small cask. These were in fact lanterns, supported by poles, and connected together by white cotton or gauze, which was here and there coloured. The head of the monster was of large dimensions, with a wide-extended mouth, showing its fiery tongue and rows of sharp teeth. The movements of the serpent were well managed, and its gyrations, twistings, and windings over the people's heads, gave it a formidable look. It appeared as if in search of an illuminated globe, representing the old year, as the serpent is supposed to typify the new one. It was, from time to time, permitted almost to seize the globe, which was then hurried away, upon which the ponderous jaws would come together with a crash, and then the serpent would hurry onward again in hot pursuit. I was told that it swallowed the globe at the expiration of the year, but I did not speak to any one who saw the finale. The figure of this serpent was from eighty to one hundred feet in length, and two feet in diameter.

During this closing scene of the festival, all the Chinese houses were open, and the josh-houses and idols illuminated with wax candles, and decked with flowers and tinsel.

Theatrical exhibitions were at the same time going forward in many places; open sheds are erected for this purpose, where the exhibition was entirely gratuitous. The actors, I was told, are paid by a general subscription, which also provides for the other expenses of the spectacle. These sheds are closed on three sides, but open on that which faces the street. The stage is raised about six feet above the street; the whole

is richly decorated with silk hangings, and banners with many inscriptions, and illuminated with coloured lamps. The stage, which was by no means of large size, was occupied by a table and two chairs. The dialogue was in a kind of recitative, with an accompaniment performed by beating with two small sticks on the bottom of a copper kettle of the shape of a coffee-pot. The person who performed this duty appeared to direct all the spectacle, as prompter and leader of the orchestra. The other musical instruments were the gong, cymbals, and a kind of hautboy, the holes of which are not arranged with any view to produce harmonious sounds. The dresses of the actors were very rich, and the females were represented by young men or boys. The male characters were for the most part masked, but not the female; the former generally had long black and white beards. The principal part of the performance seemed to consist in attitudinizing, and appeared to interest the audience, as it did us, although according to our ideas it was not suited to the words or sentiment; for instance, during a pathetic part, whilst the actor was shedding tears, he would suddenly throw up one leg, and almost kick himself on the nose! The acting, upon the whole, was, to our notions, in a mock-heroic style; but this might have arisen from our not being able to comprehend the meaning, for the other spectators seemed greatly interested. There was something, however, which there was no difficulty in our understanding, and this was the fighting. The two combatants draw their swords or handle their spears, and begin turning round poking at each other without closing, when suddenly one runs off; the other, after having evidently informed the audience that he is the victor, then makes his exit, accompanied with a most tremendous noise from both the music and audience. After the performance had closed, it was with difficulty that I could determine whether it had been comedy or tragedy: whichever it was, it was mingled with still vaulting somersets, cart-wheel motions, and casting themselves about, indifferent as to what part they fell on, in modes which I may truly say I had never seen surpassed, either in muscular action or agility.

Several small processions were seen passing through the streets, consisting of about fifteen persons, all of whom carried banners, with inscriptions in golden characters, and were preceded by the usual music. I was told that they were celebrating a marriage; but although I followed for the purpose of observing them, and made many inquiries, I could not ascertain any thing about the manner of conducting the ceremonies. It seemed to be a kind of walking advertisement; and when they passed any Chinese house of consequence, they made a five-fold racket.

The Chinese funerals may be occasionally seen. They are seldom attended by more than the six bearers, and the music, which consists of a tambourine, gong, and triangle. The coffin is generally made of some hard wood with scrolls at each end, and appears ponderous. It is carried along at a very rapid pace, and the mode of evincing respect for the dead differs strangely from ours.

The Hindoo Mahomedans appear to be as fond of theatrical shows and processions as the Chinese; and as the day of our landing was also a holiday with them, we had the advantage of witnessing these ceremonies. The subject of commemoration was the Marama, or funeral obsequies of Hassoun and Houssien. The observance of this forms a prominent distinction between the Shiites and the Sonnites sect of the Mahomedan belief. The former consider the caliphs who succeeded to the power of Mahomet as usurpers of the rights of Ali, and bewail annually the death of his children, slain by the emissaries of the illegal occupant of the pulpit of the Imauns. The legend alleges that the children of Ali were hidden in a well, and concealed from the pursuit of their enemies by a spider, who spun his web over its mouth. Seeing this, the bloodthirsty pursuers had passed the well several times without suspecting that it contained the objects of their search. At last, however, a lizard was heard to chuck within it, by which it was known that some one lay there concealed: the hiding-place was thus discovered, and Hassoun and Houssien taken out and slain.

In the procession which we saw, nearly all this sect of Mahomedans in Singapore must have joined. A temple, some twenty-five feet high, was carried about by thirty or forty Malays hired for the occasion. In front of all came the guards and swordsmen, fantastically dressed, who cleared the way.

The bold and expert manner in which these handled their weapons was somewhat startling to the crowd and the lookers-on. I must confess that I momentarily expected to see a head hewn in two, or an arm severed from the body. These were about a dozen in number; and when they had cleared the way, they practised sham-fights among themselves, which from their expertness and grace had a fine effect. They were followed by dancers, boys in female attire, gaudily dressed. Next came some of the branded criminals, who were convicts, and then the temple, with its vast piles of tinsel ornaments of paper, borne on men's shoulders, who were concealed from view by the draperies; then came the music, consisting of small drums, instruments somewhat resembling clarionets, and quantities of small bells, accompanied with a monotonous chaunt, and long trains of followers, with banners, afterwards. This procession was very differently conducted from

those of the Chinese, for there seemed a disposition to be rude and overbearing to the crowd. Some noble-looking men, dressed in red and white, with turbans* on their heads, had a very distinguished look, particularly the Bugis from the isle of Borneo, a number of whom were pointed out to me, who might be known by their stature. The temple, after having been paraded both by night and day, was thrown into the sea about four o'clock, and entirely destroyed. For this singular termination I could find no explanation, except that what had been consecrated to the Prophet was not to be defiled by the hands of men.

In various shanties near the sea-shore, theatrical performances were going forward, but with little spirit, for all seemed worn out with the night and day's exertions. They were very polite and attentive to us, getting us seats, &c.; but, after sitting some time, we saw this was but a sorry exhibition compared with that we had seen enacted by the Chinese; the music consisted of small drums and triangles, mixed occasionally with a whistle, shrill enough to deafen, which was made by putting the fingers in the mouth.

I was very much struck with the order and good behaviour existing among such an incongruous mass of human beings as we saw collected together, speaking a vast variety of tongues, and some who would infallibly have been at war with each other elsewhere. Although there was much noise, and various games going on, yet I did not learn that a single quarrel had taken place.† I understood that the rarity of quarrels between the different races and religions is more owing to the consideration of the place being neutral ground, where all ought to abstain from hostility, than to any effect produced by the police.

The Hindoos of the Gentoo faith, also, have various amusements, among which are vertical revolving swings, with four boxes or seats, in which the occupants maintain a horizontal position. These are seen among us; but it is in the East that the fashion has originated. The machine was awkwardly made, and with its creaking added not a little to the general din.

Mr. Balestier was kind enough to have an exhibition for us on his

* There was one man with a green turban, which is the exclusive privilege of those in the direct line of descent from the Prophet.

† Rows, however, do sometimes occur on such occasions, and one took place in 1840, in which one life was lost, and several other persons were badly wounded. It arose as the Hindoo Mahomedans were passing in procession near the Chinese temples, when, being interrupted in their march, they began to throw stones at the temple, and finally resort was had to fire-arms; but the affray was soon quelled by the police.

plantation, by his people, who are Klings, from the neighbourhood of Madras. There are one hundred and fifty of them in his employ, and for the purpose of indulging their fondness for theatrical exhibitions, they have subscribed largely, and procured very costly and rich dresses for their representations during the holidays.

On the appointed evening we repaired to the plantation, where two large fires were made on the lawn, to throw light on the performances. The night was dark; and after the arrival of the company, a large white cloth was hung up between two stakes, sufficiently high to conceal the performers. After a long delay the curtain was raised, and the performance began. The actors were brilliantly dressed, a cap resembling very nearly the ibis, figured among the Egyptian antiquities, was worn, and many massive ear-ornaments; these dresses showed brilliantly by the light of the fire, which also brought out in relief the surrounding shrubs and trees from the dark and indistinct background, producing a pretty effect. The performance was a kind of opera. The music consisted of a drum, cymbals, and castanets, which accompanied the monotonous recitative. The plot was explained to me by Mrs. Balestier: the subject was "the results of misplaced friendship."

A rich, hospitable rajah, entertains a guest, who is desirous of obtaining his only daughter in marriage, and thus securing to himself the riches of his host. His suit is not favourably received, upon which he enters into a plot to ruin and debase the rajah and his family. For this purpose, after insinuating himself into the rajah's confidence, he betrays him, and makes false accusations to a Brahmin against him. The Brahmin at once proceeds to force the rajah to confession, tortures his daughter and domestics, and obtaining in this manner what he believes a confirmation of the accusation, strips him of his wealth and power, to confer them upon the false-hearted accuser. At this point of the plot, on account of the hour, eleven o'clock, we were obliged to stop the performances, but we understood that if they had been allowed to go on, the opera would have continued for three days and three nights. However much the story may be prolonged, the plot generally closes with the triumph of the good, and affords some instructive moral. There were many accompaniments to this performance, such as the mode of applying the tortures by a Brahmin, and the performances of a clown, who showed much cleverness, particularly in the mode of mimicking a European in his dress and manners. The music was thought by several of our gentlemen to resemble the Spanish, from which, however, it could not have been derived. In truth, these very operas, if so they may

be called, may have been enacted some two thousand years ago, or long prior to the dawning of civilization in Europe; and the contemplation of this probability served to give additional interest to the exhibition.

The Klings are but transient visiters to Singapore. They come, as before remarked, from the neighbourhood of Madras, remain for two or three years, obtain a little money, and return. Their wages, and that of labourers and servants, are but four dollars a month, out of which they feed and clothe themselves. The cost of doing so, however, amounts to little; for they subsist almost entirely upon rice and sugar, if they can obtain them, and go nearly naked. Some of them are artisans, in which case they receive the usual daily wages, the amount of which may be understood from the fact that half a dollar a day was paid in the squadron to calkers.

At Singapore, we met with a Gentoo of the Brahminical caste, who had been sent thither by the Indian government, for some defalcation. Although of the same complexion as the other Hindoos we saw at Singapore, his features were very different from theirs. The great distinction was in the facial angle, which by some of us was thought to be fully equal to ninety degrees, and in the mouth. His lips were quite thin, and the lobes of his ears extraordinarily large, although not perforated. This I was informed was characteristic of the Brahmins. It was somewhat remarkable to find a person of his high caste, transported to a convict settlement; for they generally affect to lead very pure lives, and by the commission of any open immorality are exposed to the loss of caste.

From the information we obtained at Singapore, from good authority, the burning of widows still takes place in Hindoostan, notwithstanding the enactment by the British government, abolishing the practice. The only difference is that it is done privately; and, according to the Brahmin, it always has been continued among the upper classes. Hook-swinging and walking on burning coals are also practised; and our missionaries have witnessed them in Singapore. Credulous people have strong inducements to undergo the ordeal, for afterward, it is believed the deity will protect them from all harm. It is said that the former is practised also in China.

According to the Brahmin, the Gentoos at Singapore are of the fourth caste, called Seedros. There are no Brahmins to the east of Singapore, and neither they nor the other higher classes willingly leave their native country, for they forfeit their caste by so doing. This Brahmin was said to be worth upwards of two hundred thousand dollars, but was living in a miserable tenement near the temple, which

latter appeared to us to resemble a Turkish mosque; but it was not so in the opinion of the Brahmin, who pointed out the difference in the shape of the dome, which is more flattened, and has a small lantern apex. Into it no one was admitted but the believers in the doctrine of the Brahmins.

There are several mosques for the different sects of the followers of Mahomet, and the mixture of other observances among the creeds of some of them is very great; for those who propagated the tenets of Mahomet in the East, engrafted them upon many of the ancient modes of worship. The Malay who is a Sonnite, disdains to have any thing to do with the Hindoo or Shiite Mahomedan ceremonies; and none but those who are hired to carry the temple, join in the processions of the latter.

I have mentioned that convicts were sent to Singapore. I was not able to ascertain their exact number, but I believe it amounts to some fifteen hundred. They are employed upon the public works; and a large prison in the suburbs of Singapore is provided for their safe-keeping at night, or when not at work. Much complaint is made in consequence of its being situated in low and marshy ground, which subjects the inmates to frequent sickness. Prisons in this part of the world do not seem to have claimed the attention they have received in other countries, and I heard the whole internal arrangement of their jail spoken of as deficient both in order and cleanliness. A sufficient number of turnkeys and attendant officers is not kept, and there is no classification of the prisoners. Many spoke of an intention of erecting a new jail, on account of the necessity of removing the prisoners from the present low swampy site. Although a surgeon is appointed for attendance on the prisoners, yet he is of little use; for every one seems to be so reckless of life in the East, and so bent upon securing a fortune as soon as possible without incurring death, that whatever retards the one and puts in jeopardy the other, is looked upon with disfavour and treated accordingly. No European looks upon the East as a home, and all those of every nation I met with invariably considered his sojourn temporary. The habit of constantly expressing this feeling gives a stranger the impression that those he meets with are devoid of happiness and contentment, and this with comforts and conveniences, nay, luxuries of life around them, which they would be very far from enjoying in their own country.

The market was well filled with venders, so much so, indeed, that the passages through it are rendered narrow and tortuous; the principal article for sale was fish, fresh and dried, and prawns. This kind of fish is numerous and abundant. The part of the market where they

are sold is built over the water, and being furnished with a loose flooring, the filth is easily got rid of. The butcher-meats consisted for the most part of pork, which is raised in large quantities. Fowls and ducks were also very numerous. A number of eggs were seen with the shell broken, to exhibit the dead chicken, and others that were rotten, in which state they were favourite food of the Chinese. Vegetables and dried fruits were also in great abundance; these latter were imported from China. Of vegetables, there were lettuces, onions, garlic, sweet-potatoes, and large quantities of germinating rice, which is sold for planting. Of the quantities of fresh fruit it is almost impossible to give an adequate idea, and they are all of fine kinds, many of which I had never before seen.

The bazaars form the general resort of those who frequent the market. Every avenue, arcade, or veranda approaching it is filled with money-changers, and small-ware dealers, eager for selling European goods, Chinese toys, and many other attractive curiosities. It is necessary to be careful in making even the smallest offers, for although it may be but half or a fourth of what is asked, it is instantly accepted. The money-changers seem to be a peculiar class; they are much darker in colour than the rest of this singular throng, and are seen sitting cross-legged on their tables, with extensive rouleaux of copper coin, heaps of cowrie-shells, and some silver.

I was much surprised at the great difference existing in these countries, when compared to our own, in respect to the coin, which is divided into pieces of extremely small value; and I could not help viewing this contrast as tending to show the depreciation of labour on the one hand, and the value both of time and money on the other. Indeed, the difference between the condition of these people and that of our own countrymen might be likened to the difference in the value of the smallest of the coins that is circulating in the two regions. One cannot but look upon these Eastern nations rather as allied to the animals subservient to the wants of man, than as belonging to the human race. The majority of them are as industrious as bees, and seem to employ their time very much after the same manner, in collecting food, without any farther end in view but storing up materials wherewith to live.

The trades are chiefly engrossed by the Chinese, particularly those that are sedentary, and performed within doors. The calkers, and those vocations connected with vessels, are generally Hindoos of a peculiar class. Some of these were employed in the squadron, and they also work as cooleys and labourers. They are very spare and thin, and have little flesh to trouble them; indeed, their thighs, and

arms, and the calves of their legs, seemed to be dried up; their shoulder-blades are prominent, and their ribs conspicuous. This habit of body is, undoubtedly, owing to their diet, which consists almost entirely of rice; they abstain altogether from the use of meat, and indulge but sparingly in that of fish. They are very scrupulous about the preparation of their food, bringing with them their own vessel to cook their rice, and refusing to use those which our people had cooked in. They are easily to be known by a small blue line of tattooing down the forehead, or a spot made with earth. What idea is connected with this custom I did not exactly learn, but I understood that it was always their custom thus to protect themselves when working for persons of an opposite faith. They were found to be steady and good workmen, and received fifty cents a day for their labour.

The Malays seem to bear the palm for idleness among the common people, and are rarely found engaged in any steady employment, preferring those that are either light or of a roving character. They engross the occupation of the drivers of palanquins, are strong and active, and will run a great length of time and distance, in a hot and oppressive day, seemingly without inconvenience. Those of the latter sort who are more wealthy, indulge in many luxuries, particularly in dress. They usually wear mustaches, which are always neatly kept, and occupy no small portion of their attention and time; and, contrasted with the white turban, with its band of scarlet and gold, has a particularly pleasing effect, with their swarthy skins. On holidays they are to be met with in their snow-white raiment, thrown over a richly-embroidered coloured vest, fitting tight to the body, with loose trousers, tied just to meet their embroidered slippers at the ankle.

The Malay population dwell chiefly in the suburbs, or what are termed the Malay villages. Their houses are built somewhat after the fashion heretofore described, on posts, as practised by this race in other places; but there are many who conform to the European mode. Nearly all of them are cultivators, and almost every house has a small shelf appended to its window, on which unhulled rice (known here as paddy) is exposed for sale. Besides this, many have dried fish, vegetables, and, in these days of rejoicing, Chinese fire-crackers. The villages through which we drove had a joyous look, and the population was apparently occupied in amusing themselves during the holidays. Some were engaged at foot-ball, and many of the boys and men were playing "hobscob."

The most distinguished men as to looks are the Armenians, who are among the principal merchants of the place. Although few in number, yet they have much influence from their wealth; they are an exceed-

ingly handsome race, dress after the English fashion, and generally speak English or the Portuguese fluently. Some of them, that I had occasion to visit, were extremely courteous, but spoke of the inhabitants of Singapore generally as of a low class.

The Armenian church is one of the finest buildings in the place: service is held in their church every morning at six o'clock.

Just before our arrival, one of the Armenians was detected in an extensive forgery, by the water-mark of the paper. It had not been decided what punishment was to be inflicted upon him, and it was an act of which the government was not prepared to take cognizance. From what I heard, I was inclined to believe that the influence of his friends was so great, that by their intercession the punishment that is so ready at all times to be inflicted on the poor, would not be inflicted; yet even-handed justice to all is here made a great boast of.

Parsees are not numerous at Singapore, but they rank among the most wealthy of its inhabitants. They are dressed partly after the Eastern and partly after the European fashion. They excited our attention as being worshippers of fire, which they venerate as emblematical of the Deity. They are of various shades of colour, and generally more robust and portly than the other races. Many of them speak the English language.

Some persons, who were said to be Arabs from the east coast of Africa, were also pointed out to me, who were quite different from all the other races. They had what would be termed woolly hair, with large whiskers, and one of them was remarkable for his large blubber lips. Their complexion did not strike any of us as being much darker than that of the Hindoos or Malays. Their face was long, and the nose by no means prominent: one of these had a strange appearance about his head, and it was some time before it was discovered that it was owing to his beard and whiskers, which were long, being in gray and black stripes. Although it was undoubtedly done by some artificial process, yet it seemed quite natural.

Individuals of the Caffre tribe, from the east coast of Africa, were also met with; and it is said that there are many of them in Hindoostan, whither they have been carried by the English from Mozambique; but they are rarely met with so far east as Singapore. They resembled those seen by us at Rio, though we had no opportunity of identifying them by their tattooing.

The Chinese burial-place is about a mile from the town, situated on the side of a hill, at the apex of which is the josh-house, which, as usual, is filled with hideous idols. This building has a light and pretty effect, principally arising from its situation.

This burial-place is almost filled with graves; and there was a small bench or platform in front of many of the tombs, on which were the remains of josh-sticks, which, I was told, were here burnt annually, in remembrance of the dead. The Chinese appear to be fond of monumental inscriptions, for there were but few graves without one. I was very desirous of hearing some of these translated, but we had no interpreter with us.

On our road to Mr. Balestier's, we passed the burying-place of the Gentoos: it is quite open, and apparently a dense shrubbery; but near the town end is a chunam pedestal, surmounted with a lotus, for a drawing of which I am indebted to Mr. Peale: this sketch will be found at the end of this chapter. On its sides are inscriptions in Cingalese, and one in English, the latter of which states that "This burying-ground belongs to the Hindoo people of Madras and Singapore. 1828." The design was tasteful, but our admiration was somewhat lessened on finding that the material is not stone, to which it has a very strong resemblance.

I spent a large portion of a day at the magnetic observatory, which is under charge of Lieutenant Elliot, of the Indian army. The instruments were all apparently well mounted; but I was somewhat surprised at observing that several chronometers were used for marking time, when it could have been more conveniently and accurately made by a single clock.

Lieutenant Elliot was erecting an apparatus to collect and develope atmospheric electricity, but he had not, as he informed me, been able to succeed. Considering the station was a magnetic one, it was surprising to me that he should be trying such experiments, when the two agents of electricity and magnetism are so nearly allied, and especially that he should have done it in such immediate contact with the instruments. The observatory is situated about two miles from Singapore.

At Singapore there are three American missionaries, Mr. North, Mr. Hepburn, and Mr. Dickinson; the former, who has resided here six years, is the principal. The two first have a school of fifty Chinese boys; but as it was vacation time, we had no opportunity of seeing them at their exercises. Mr. North spoke to several of our gentlemen in high terms of the intelligence of the Chinese children. The Chinese boys are received at an early age, and board in the family of the missionaries, to whose guidance they are wholly given up by their parents. They seldom visit their parents, and never without a special request. These children are taught the rudiments of an English education, but no efforts are made on the adult popu-

lation. The hope is, that the results of educating the young, and impressing them with the truth of the Bible, will be apparent in after years, and may conduce to some good. Only one of the scholars has as yet been baptized. They are all represented as well-behaved and docile.

The Singapore Institute, another academical establishment, is under the care of the Rev. Mr. Montgomery, an English missionary. It is delightfully situated on the public ground fronting the bay. There are in it about one hundred boys, who are taught on the monitory system. The branches here taught are those comprising a common school education: there are no schools for the higher branches.

Although the Protestant missionaries have not met with any success in propagating their tenets, this cannot be said of the Catholics, who have already made one hundred and fifty proselytes to their faith. There is likewise a very interesting establishment here under the name of the Raffles School, of which Mr. Dickinson, the third American missionary, is principal. These gentlemen have given up their more direct missionary employments, as it afforded no prospect of success, and turned their attention to the more immediately useful object of teaching the children. They are known in Singapore as the "American padres." The Raffles School is kept in a palace-looking building, but as houses are of small value, the rent is proportionably low.

Mr. Dickinson made the voyage in the brig Himmaleh to many of the islands in the China seas, and possessed much information in relation to those he had visited, and their inhabitants. It appeared to be his impression that there was no opportunity afforded for missionary labours in any of the ports under the authority of the Dutch. There is a mission established at or near Batavia, and this is the only place they will permit one to exist, in order that it may be immediately under the eye of the government. Mr. Dickinson is of opinion that an establishment is much needed on the island of Celebes, and that it would be productive of decided good. It seems scarcely possible to believe that any European nation should have held possession of these islands so long, and not have introduced a single valuable custom among those who are under their rule. The natives in fact are now as much at liberty to pursue their infamous acts of piracy on each other and Europeans as ever, and to capture and carry into slavery such as they deem fit. These slaves even find their way to Singapore, where they are not even aware that they are free by the laws of the land, in defiance of which they are held in slavery. These are of the race of Papuans or Negritos, a portrait of one of whom has been given in the chapter on Manilla.

From Mr. North we obtained a number of rare Malay and Bugis manuscripts, forming a collection which is said to be the largest now in being, that of Sir Stamford Raffles having been lost. Some of them are beautifully written.

One of the most amusing incidents that occurred during our stay at Singapore, was a visit to a ship of the king of Cochin-China, which we made by express invitation. The whole trade of Cochin-China is a monopoly in the hands of the king who owns the ships, which likewise compose part of his navy. They are built after the European model of some half a century back. The vessel that furnished it belonged to France, and was wrecked on their coast many years ago, after which missionaries and artisans were sent out by Louis XVI., who taught them many of the arts of Europe. The outward form of the old French ship appears to have been pretty well imitated, but the stern is more elaborately carved and ornamented with gilding. The internal arrangements also show a great variation from the model, and in them the notions of the Cochin-Chinese prevail, unmixed with those of Europeans. The two ships were about five hundred tons burden; they are very roughly built, have huge sterns, and exceedingly thick sides. Indeed every thing on board is unsightly, and all the work is of the rudest description, giving no very high idea of the proficiency of the mechanics of Cochin-China.

These vessels have a middle deck, which is pierced for guns. The cabin, into which we were shown, had a josh-temple, and with josh-sticks burning. There were two cabins; that under the poop had small rooms, and was very low between decks. There were no fixtures, but simply a mat to lie on. The binnacle is a bed of sand, in which the compass-box is set for security; and a number of small, coloured sticks were stuck into the sand, which were represented to be markers, by which the way of the vessel was noted. A manuscript chart, which the captain took great pride in exhibiting, was shown us. This was evidently a copy of an English one, but all the names were in Chinese. The crew had a decided Malay look, and were small men; they are in form stout, but are not athletic. There did not appear to be any mixture of races among them. As we passed around the deck, we observed a party of five or six of the men engaged in gambling with cards, in which they were so much engrossed, that they heeded not the command of their officers to desist and make room for us. This vessel was furnished with rattan-cables, which were exceedingly well made. The wheel for steering appeared odd, on account of its small size, and the helmsman sits when he takes his trick. On either side of the deck, just abaft the foremast, there is a cook-house, formed of a

huge box of earth, about three feet above the deck, in which a few large stones are set to support their earthen cooking vessels.

The officers and men have but a small pittance of pay. The captain, for instance, I was told, received only three dollars a month. A supercargo or factor is appointed for each voyage, and is obligated to do all the business for his master, and take charge of the whole commercial enterprise without receiving any of the profits for the success of the undertaking; he is also held to be responsible, and his property is accountable likewise for any depreciation in the foreign market; and if any suspicions fall upon him of mismanagement, he is sure of the bastinado on his return. The consequence is, that the king of Cochin-China is a successful merchant, grows rich on his commercial speculations, and is always well served. The recompense of the factor is but a small quantity of rice.

Four or five of his ships resort annually to Singapore, loaded with sugar, coffee, ivory, and many other articles of less importance, in return for which they take British and India goods, fire-arms, iron, glassware, &c. I have been informed that his success in trade has been such that out of its profits within a year he has added a steamer of six hundred tons to his navy.

Almost every one has some idea of the external form of a Chinese junk; but the arrangement of the interior, although of great antiquity, was new to us all. From the appearance of every thing on board, the arrangements cannot have changed much in the lapse of many centuries. The junks are of various sizes: the three that were visited were from seventy-five to eighty feet in length, about twenty-two feet beam, and about eighteen feet high forward, descending in a curve to within three or four feet of the water amidships, and then again rising in a like curve to the height of twenty-five feet. At the top of the stern is the poop-cabin, with accommodations for the master, his clerk, and the trader, in four small sleeping-rooms; under these are other cabins, with an eating apartment, and before this is a platform or small deck, from which the vessel is steered. The rudder is an extraordinary piece of wood, fully equal, in point of size, to that of a line-of-battle ship. While in port it is always unshipped, and drawn into the vessel on a small inclined slip or way. The junks have usually two large masts, with a jigger, and there are no less than three windlasses, which are used upon every occasion; without these the junks would really be almost unmanageable. In order to preserve the vessel dry, they have waist-boards of solid thick plank, which are unshipped in port; these reach from the plank-sheer to the rail, and from appearances effectually answer the purpose for which they are intended. The cargo, however,

was more interesting to us than the vessel: this consisted chiefly of teas and china-ware; the latter, to our surprise, we found neatly and carefully stowed in bulk in the hold. The lighter articles of Chinese manufacture are arranged about the vessel, and even hang over the poop and sides. The wooden anchors, cables, grass ropes, odd and curious paintings, the grotesque mode of external ornament, with the large eye on either bow in the colours of the rainbow, did not fail to attract our attention. We were also amused with the junk-like form of the tiny boat, but these, as well as the Chinamen themselves, are so well represented in Chinese pictures, that no one can be at a loss to conceive their peculiar form. Words fail to express the content and pride with which the Chinaman sits and enjoys his aquatic excursions; and though ridiculous in appearance, and ill fitted in every way to contend with the elements, yet there is something about the junks that commands a certain degree of respect.

The trade of Singapore, although it has but lately grown up, has nevertheless reached the large aggregate of $24,500,000. About one-sixth of this amount goes to Great Britain, and $600,000 to continental Europe. There are no duties on imports or exports, and every vessel is left free to come and go as they please; all that is asked is of what the cargo consists, its value, and the size of the vessel. These particulars are published weekly in the only paper. Every thing is sold for cash, or on a very short credit, and all accounts are kept in dollars and cents. Perhaps in no other port is business conducted in so prompt a manner as at Singapore, and this has probably grown out of the transient character of the visiters of all nations, who come and go as they please, which makes it necessary to receive payment for the goods as soon as they are delivered.

From what has been already said, it will appear that very little of the importance of Singapore is owing to its own productions; yet there are many things shipped here that are the product of the Straits, or of the territory under the Straits Government, as it is called. Among these are pepper, cloves, sugar, nutmegs, coffee, and gambeer; to which may be added the betel-nut. These products are procured from Pinang and Prince of Wales Island, and reach a large amount. Tortoise-shell may also be included in this trade, for almost all that is taken in the Eastern seas is now brought to Singapore for sale; and it may indeed be said to be the chief mart of that article. Any attempt to give a catalogue of the trade of Singapore would fall short of the truth, for it may be considered as an entrepôt where all articles arrive and are distributed. The expenses of doing business are established and published in the gazettes, so that any one may inform him-

self of the charges he is liable to incur, and of the advantages it has in that respect over the other ports in the Eastern seas. What renders the traffic at Singapore still more convenient is, that almost every thing is sold by weight, probably because so large a proportion of the population is from China, in which country this method is habitual. In employing it, however, the articles from different countries are sold by the weight of the country whence they come. For instance, gold-dust being for the most part brought by the Malays, is sold by their weight, called a "bunghal," which is about equal to two ounces; rice, &c., the produce of Bengal, is sold by the bag, containing one hundred and sixty pounds, which is termed a "maund." The foreign business is generally in the hands of a few English houses, but the greater part of the mercantile class at Singapore are engaged as agents, or do a commission business, for various houses in Europe, Calcutta, &c. There is a branch of the India Bank at Singapore, which, however, is limited in its discounts and business; and there are besides a large number of insurance offices, in which policies may be effected on almost any risk. The capital of these companies is for the most part owned in Calcutta.

Although Singapore has fewer real advantages for trade than many of the ports around, yet it has now acquired the superiority, and holds intercourse with the surrounding countries.

Its trade with China has of late much increased, in consequence of the difficulties between that country and England, during which it was the only port where the junks were allowed to trade free of molestation. It in consequence became for the time a place of transhipment for teas and other Chinese articles to English vessels. For this reason, Singapore may have appeared to us a more active place of business than it would have done had the trade with China been no more than ordinary. No large commerce can well exist between China and Singapore alone, for the supplies the latter furnishes to that empire, are confined to birds'-nests, biche de mar, tortoise-shell, &c.

Borneo probably furnishes the most valuable products that are brought to Singapore, and there are more than one hundred prahus engaged in the trade. These are for the most part navigated by Bugis from the island of Celebes, who may be termed the carriers of this archipelago. This people frequent all the ports on the south and southwest side of that great island, and are frequently employed by the rajahs or chiefs to conduct their trade with the other ports. The restrictions they are under in visiting the Dutch possessions, and the restrictive policy of the latter, which admits them to but one or two ports, has driven them to seek that of Singapore, though more distant.

These prahus are said when trade or employment fails, to turn their attention to piracy, if a favourable opportunity should offer; though no one seemed disposed to class them as pirates of the same character as the Malays, but rather to look upon them as generally inclined to be peaceable.

The island of Celebes sends to Singapore nearly a hundred prahus annually, and they also come from Flores, Timor, Amboyna, Sumbawa, Lubok, and even from Papua and Aroo. From the latter countries they bring the bird of paradise, so abundant in the market of Singapore. The prahus that come annually from these distant ports are not more than fifty in number.

With the ports of Sumatra and Java there is a great deal of intercourse, and I was told that the native vessels engaged in it, independently of those belonging to Europeans, amount now to some six hundred. These are of various sizes, and keep up a constant intercourse, some of them visiting the ports several times during the year. These arrive from both coasts of Sumatra, and belong to the rajahs or chiefs of small places, of which even the names are little known, and whose subjects are mostly engaged in piracy. The island of Bali likewise engages in this trade, through the agency of the Bugis. The products of the Malayan peninsula, and of all the ports of the Malacca Straits, are also brought to Singapore; but these may be termed incidental supplies, for they fluctuate much, both in quantity and value.

The most regular of all the trade is that with the islands of Rhio and Lingin, in the neighbourhood on which the Dutch have a factory. This trade is carried on in the sampan boats, and the people of these places prefer resorting to this free port to dispose of their produce, rather than sell it to the Dutch. The number of the vessels employed in this traffic was represented to me to be somewhere about five hundred. The articles brought from all these places are very much the same, and consist of pepper, rice, camphor, sago, coffee, nutmegs, oil, tobacco, wax, benzoin, sea-weed, dragon's-blood, biche de mar, birds'-nests, tortoise-shell, diamonds, gold-dust, pearls, the pearl-oyster-shell, sandalwood, rattans, ivory, some hides, and articles of native manufacture, such as sarongs (worn as a wrapper, which come principally from Celebes), salendongs, and lacquered ware.

The foregoing detail exhibits a vast variety of articles of commerce, and accounts for the employment of the fifteen hundred, or two thousand vessels of various sizes, that are continually pouring into this mart. It may readily be imagined what a stir and life this commerce must create; and when it is considered that nearly all the various nations of the East resort here for the purpose of trade, it will not

excite much astonishment that Singapore has grown up so rapidly in the face of older and longer-established marts, which it bids fair to surpass, both in wealth and importance.

The taxes on property at Singapore are by no means heavy. They are in part levied upon houses and carriages; the former pay an annual tax of eight per cent. on an assessed value; but as this valuation is very low, the tax is not heavy. In the country, the rate is only four per cent. These receipts are published annually, in conformity with a law passed since 1839. The enactment of this law was brought about by the force of public opinion, and the influence of the tax-payers, which have compelled the Indian government thus to make known their financial secrets. The whole amount of tax raised is $25,829.

Another act was passed about the same time for the abolition of slavery, under an understanding with the holders of slaves that they should be manumitted by a certain time. This time arrived only a few months prior to our arrival, but the owners showed little or no disposition to carry their agreement into effect. A notice from Governor Bonham was indeed published, calling upon them to comply, but such is the force with which they apparently cling to slave-holding, that I was told that many of those who were most forward in their protestation in favour of abolition, still retain those belonging to them, and that many persons are yet actually sold. These will no doubt be held in bondage until some active measures are taken by the Straits Government to put a stop to the traffic.

We saw some of the Negritos who are held as slaves: their stature is quite dwarfish when compared with the surrounding crowd. Their complexion is not darker than that of the Hindoos, and entirely different from the hue of the pure negro; but they far surpassed him in ugliness. According to an intelligent gentleman's authority, they are brought from Papua, and are usually spoken of as being brought by the Bugis, in the same vessels that bring birds of paradise for sale. Further inquiry satisfied me that they are captured on the west end of New Guinea, which coast the biche de mar fishers are in the habit of visiting. Besides being distinguishable by their small size, they may be known by their downcast looks, as they are seen passing among the crowd of this great Babel without appearing to be of it.

Among other sources of revenue is the vending of opium: the shops are licensed by the government, and the revenue is said to exceed eight thousand dollars from this source alone.

These opium shops are among the most extraordinary sights in Singapore; it is inconceivable with what avidity the smokers seek

this noxious drug at the shop windows. They then retire to the interior, where a number of sickly-looking persons, in the last stage of consumption, haggard, and worn down with care, are seen smoking. The drug is sold in very small pieces, and for ten cents enough to fill a pipe once is obtained. With it are furnished a pipe, a lamp, and a couch to lie on, if such it may be called. The pipe is of a peculiar construction, and is in part of metal, having an interior or cup just large enough to contain a piece of the size of a pea. The opium is difficult to ignite, and it requires much management in the smoker to obtain the necessary number of whiffs to produce intoxication in one habituated to its use. The couch is sometimes a rude bench, but more often a mat on the floor, with a small raised bench. Each of these mats in the frequented shops is generally occupied by a pair of smokers, who have a lamp between them.

These shops with their inmates formed one of the most disgusting spectacles I saw during our extended cruise; although, to one who could be amused with human degradation, this sight could not have failed to afford pastime.

It was not difficult even for a stranger to distinguish those who have long indulged in this pernicious practice, from those to whom it is yet new. The eagerness with which the former sought the mat, seized the pipe, and inhaled the smoke, showed a nervous anxiety to reach that point where forgetfulness should come. This in the novitiate was but the work of a few minutes, while those whose organs had become accustomed would draw long whiffs and puff away until the weakened state of their lungs would betray them, and cause them to stop to renew their breath before they were enabled to accomplish their wishes. I learned that many of the old smokers found so great a difficulty in inducing the action of the smoke that they were accustomed to have recourse to swallowing the drug itself. The Chinese only are addicted to this practice: the Gentoos and those of the Moslem faith look upon it with great horror and disgust.

The individuals whom I have described above are the wealthy, who can afford to smoke the drug as it is found in commerce. From the difficulty with which it burns there is a large residuum left, which is carefully taken out of the pipes, and sold to the less opulent, who in like manner smoke it, though without the luxury of mats and lamps. I was told that there is still a poorer class of Chinese, that again use the residuum of this second smoking.

The Chinese at Singapore possess every facility for full gratification in the smoking of this deleterious drug; for there is no interdiction to its introduction, and most, if not all the vessels engaged in smuggling

it, resort there in their passages to and from Bengal, and many of them are owned or under the agency of the merchants of this place. It is not a little remarkable that even those who are engaged in the trade, condemn its immoral and hurtful results, while others at a distance offer many reasons in its defence. I must say that it appears to me truly strange that with the scenes that daily offer themselves in Singapore, before the eyes and under the cognizance of the governor and officers of the place, some steps should not be taken to put a stop to the practice altogether, instead of making it a source of revenue.

This government seems to be actuated by totally opposite principles from all others that attempt colonization; for while it has been considered necessary in other places to introduce females in some proportion to males, for the purpose of softening the manners and the savage propensities of our sex, they have been here interdicted almost altogether. I made many inquiries respecting the reasons that had induced so extraordinary a course, but all appeared to be equally ignorant with myself.

The population, from the most authentic returns, is in all about sixty thousand souls: of these forty-five thousand are Chinese, eight thousand Malays, seven thousand natives of India, and about one hundred and fifty foreigners; and only *one-tenth* of the whole are females.

A short description of the Malayan peninsula will be a proper sequel to the account of the island of Singapore. What is usually included under this name extends as far as latitude 7° N. It is nearly five hundred miles in length, by about one hundred and fifty miles in width, and comprises about fifty thousand square miles. It is mountainous and hilly, and destitute both of extensive valleys and plains.

A range of mountains traverses its whole length, rising gradually towards the north, to the height of about six thousand feet. Its geological formation, from the best reports, is exclusively granite; which towards the south has been found to contain many minerals, and the ores of gold and tin in particular. In the latter metal, it is supposed to be the richest of any country in the world. In other respects it cannot be called a favoured region, and in comparison with the surrounding countries is barren. The greater portion of it is still occupied by the primeval forest, which is frequented only by beasts of prey.

The Malayan peninsula, and the surrounding islands, are now far less populous than they formerly were. Intestine wars among the

chiefs have, in fact, nearly depopulated the former, and what they have left undone, the pirates in their incursions on the weakened towns, have, by their cruel deeds of murder and rapine, completed. The part of the peninsula that is tributary to the king of Siam has fared but little better; for his extortions are said to know no bounds. Some accounts state that the Malayan peninsula has once been the seat of civilization, and that various mines have been discovered, by some of the few travellers who have made short excursions from its coast. It is alleged, on the other hand, that both it and Singapore were colonized as late as the twelfth century, by the people of Sumatra; other conjectures, said to have some foundation in the traditions of the natives, state them to have been inhabited previously to that epoch, by a half-savage race, which had the features of the Papuans. Other accounts again, assert, that the aborigines were the Jakongs, or Rayetutans, in the interior, and the Rayetlaut, or fishermen, on the sea-shore.

The Malayan peninsula contains nine petty states, each of which is ruled by a chief, who acknowledges the authority of the king of Johore. The Dutch, however, formerly had through commercial treaties much influence with the chiefs, and with the consent of the king of Johore, elected a Bugis chief, by the name of Dyar Cambodia, over the nine states. This produced a division and contentions: four of them revolted, and invited over a prince of the royal blood from Sumatra, Rajah Malayan, whose party was finally successful, and drove Dyar Cambodia into retirement. Upon this, stipulations were entered into, by which it was agreed that the four chiefs should be assembled by the sovereign to consult on the affairs of state, and that a majority should rule. In return they were to provide for the maintenance of the sovereign, by levying an annual tax on the inhabitants, each house contributing annually one gantam of rice, two cocoa-nuts, and one suku.

On the occasion of all rites, such as marriages, deaths, and circumcisions in the royal family, each district was bound to send three buffaloes, to distribute alms to the poor, and in case of war to furnish its quota of men, arms, and ammunition. Dyar Cambodia sought refuge at the island of Rhio in 1773. Since that time the kingdom has undergone various revolutions, and different sovereigns have held rule, who have finally by their intestine wars almost depopulated the country.

The inhabitants have many singular customs, in some respects not unlike those heretofore described as existing among the Polynesian islanders.

In religion, the Malays of the Peninsula are all Moslems, and are

said to resemble the Arabs in the simplicity of their worship more than they do the inhabitants of Hindoostan. They practise circumcision, and the women appear in public unveiled. They hold three days in the week as lucky to begin an undertaking, namely, Monday, Thursday, and Friday. They devour locusts, and consider buffalo-meat as the greatest luxury.

As soon as a child is born and washed, the father puts his mouth to its ears and asks a blessing. On the seventh day, the operation of shaving the head takes place, when prayers are likewise offered up. A midwife is always in attendance at the birth, and is engaged for forty days. On the fortieth day the mother performs her ablutions and prayers, and is then looked upon as clean.

It is customary on an engagement of marriage for a day to be fixed for the bridegroom to transmit the money for the nuptial expenses, before which day the ceremony of filing the teeth of the woman is gone through. This is performed by the women with a kind of fine stone found at Acheen, or with a small steel file. The operation is accomplished in an hour, but is very severe; the teeth are filed off to one-fourth of their length. This operation is also undergone by the males; but they encounter it at an early age, when it is generally made an occasion for festivities. I have been informed that this operation is never omitted, and that the figure thus given to the teeth is considered as a great beauty. After the teeth are filed, they are blackened, which is effected by a liquid called grang, obtained by charring cocoanut-shells. This practice of filing the teeth I had often observed before I heard of its being a general custom among the Malays of the peninsula, having seen it among the natives of Sooloo; the fashion closely resembles the Africans of which I have spoken in the first volume.

Marriages are preceded by the betrothal of the parties. To make this arrangement, the friends of the bridegroom wait upon the bride's father, to whom they present a ring and a few clothes. The nuptial expenses are then agreed upon, and the portion of the bride is set aside. This is about thirty rupees, and is always paid in silver or gold. The betrothal takes place before witnesses and an agent of the bride, whose consent is asked as a matter of form. After this the husband may take his wife whenever she arrives at the age of puberty, and carry her to his own house; but she always remains with her father until that event takes place.

On these occasions, when the parties are wealthy, a feast of buffalo-meat is given. The bride, three days before marriage, cuts off her hair in front, and dyes her nails and the palms of her hands yellow with henna.

The ceremonies after death are not less curious: washing and shrouding of the corpse always takes place, and it is clad in the best clothing of the deceased. On the third, seventh, fourteenth, fortieth, and hundredth days, oblations of spices, aloe-wood, and flowers, are offered.

The Mussulmans of India, in digging graves, never exceed the depth of the navel for a man, while those for a female are always breast-deep. Near the bottom is dug a side niche, into which the body is put. The niche is then closed with boards placed on their edges, after which the grave is filled with earth. The first portion put in is thrown on loose branches, that are laid over the grave in order to sift it and allow it to fall more lightly. Their graves are marked with two small wooden pillars, with the earth heaped up between them; the largest of these denotes the position of the head.

On the Malayan peninsula they have various feasts and festivals, that partake more of the customs of the Arabs than of the islands of India. On these occasions sacrifices of buffaloes take place, a practice which is thought to be peculiar to this part of the East. The buffalo selected for this purpose must be without blemish or disease. The animal about to be sacrificed is taken to the mosque, where it is thrown down, its fore and hind legs tied, and the head secured; water is poured over it, and the offering made. The priest, after saying prayers, cuts the throat; the carcass is then flayed and divided into two equal parts. One-half is given to the inhabitants, and is generally cooked and eaten on the spot; the other is divided among the higher orders. The leg-bones are never suffered to be broken, even after death; neither is the spine, nor are the horns of animals sacrificed suffered to be used for common purposes, such as handles of knives, &c.

Among the animals that are found in the Malayan peninsula, are the elephant, rhinoceros, a variety of tigers, leopards, bears, monkeys, alligators, guanas, and sometimes the tapir: there are one or two species of deer, which are exceedingly small in size, and of delicate proportions. Of birds, there are a vast variety, including the argus-pheasant, horn-bill, peacock, large vampire-bat, humming-bird, and snipe. Snakes abound, many of which are venomous.

The neighbouring seas afford a great variety of shells and corals; among the latter I may mention the cup of Neptune (Alcyonium), which grows to a very large size, and is not found elsewhere. Our collections, by the industry of the naturalists and officers, were much increased here.

The small island of Singapore is destined in all probability to govern at some future period the whole of this country, and will, in course of time, be one of the points from which they are destined to receive the arts and civilization of Europe. It strikes me, therefore,

as incumbent on those who rule over this rising colony, to see that the general administration may have a tendency to promote civilization. I regret to say that I could perceive but little indication of any other principle than that of gain.

During my stay at Singapore, the subject of steam navigation was much talked of, and many projects appeared to be forming by which the settlement might reap the advantages of that communication, when established between India and China.

Some idea of the facilities that this method of transportation has already furnished will appear from the fact that I received letters on my arrival there, via England, only seventy-two days after their date in the United States. This places the East in such close proximity to Europe, that instead of looking for yearly or monthly accounts, as was formerly the case, they are now on the watch for daily news.

This has already, as may be supposed, altered the current of trade, instead of specie, drafts being sent out by the ships with orders for shipment of goods from China. The transactions pass through banks, or are performed by purchase of government and individual bills. Many believe that in a very few years the whole commerce of these seas will be carried on by steam, which would afford peculiar facilities for communicating with the ports of the Chinese Empire, by the control it gives the commercial world in counteracting the monsoons, which have hitherto regulated the routes of commerce. All that is needed is capital to set it in motion.

As vessels of war, the steamers have been particularly useful in the British operations against China. The shallow and unknown coast of that country, and its almost impenetrable rivers, could have been rendered accessible by no other means.

Singapore, as a port of supplies, offers many inducements, although there are the same objections to it that apply more or less to all the ports of the East. One of these is caused by the ravages of the white ants. A portion of our flour was rendered entirely unserviceable, for these insects had literally perforated the barrels in all directions; and in rolling them over, the staves appeared like fine sieves, through which the flour passed in every direction. This, however, was only the case with that which had been stored in a dry upper loft. The larger portion of this article, which had fortunately been left on the ground-floor or basement of the storehouses, had escaped this injury. The latter place was both cooler and damper than the former, and these were the only apparent reasons why the barrels had escaped uninjured.

The climate of Singapore, notwithstanding its geographical and local position, is considered as very salubrious: it is admitted by all

that the neighbouring coasts and islands are quite the reverse. Although the island is near the Malay shore, yet the site of the town being on its southern point, is within the influence of the prevailing winds, which it is generally supposed carry off the miasma as fast as it is formed; yet every thing seems favourable about the settlement to produce disease: it lies low, with large tracks of marsh and jungle in its neighbourhood. The heat, however, is very much modified by the sea-breezes, and varies only from 79° to 84°; the mean annual temperature has been found to be a little above 80°; in this computation, however, I understand the night hours had been entirely omitted; had the observations included those also, they would undoubtedly have lowered the mean considerably. It was remarked that it rains for an hour or two almost every afternoon, and in consequence of these daily showers, vegetation has a rapid or rather rank growth. To these frequent showers is ascribed by some the healthfulness of the place, preventing malaria by maintaining a constant growth in the vegetable kingdom, and thus tending to absorb the noxious and deleterious gases.

The diseases most common in the East, such as dysentery, diarrhœa, and fevers, are seldom experienced here; but, at the same time, it is necessary to take every precaution, and avoid the heat of the vertical sun. The crews of the squadron were remarkably healthy, and only a few of them experienced any ill effects from the heat. One man on board the Vincennes, was attacked with a brain fever, of which he died a few days after leaving the place. This case was attributed to great imprudence on his part, in defiance of all warnings not to expose himself.

On my arrival at Singapore, various reports were made to me of defects existing in the tender Flying-Fish. It was to be expected, after the arduous service she had performed; yet, having brought her safely thus far, I felt a natural desire to carry her home with us; and in this all the officers seemed to partake. But the idea of risking the lives of her officers and crew, after the disaster that had already befallen her sister craft, was not to be endured; and I saw that it was necessary to have a thorough examination of her before I ventured her in the homeward voyage. I therefore ordered a survey by the most experienced persons in the squadron, who, although they could not point out any conspicuous defects, were satisfied that from long and hard service she had become weakened in her frame, and that she would not only need much time, but a large expense, to place her in a fit condition to make the voyage home. I must say that even after I had received the report I still felt a strong inclination to persist

in bringing her back to the United States; but my final decision was against it. The consul was therefore desired to advertise her for sale, and in the mean time all her stores and armament were removed.

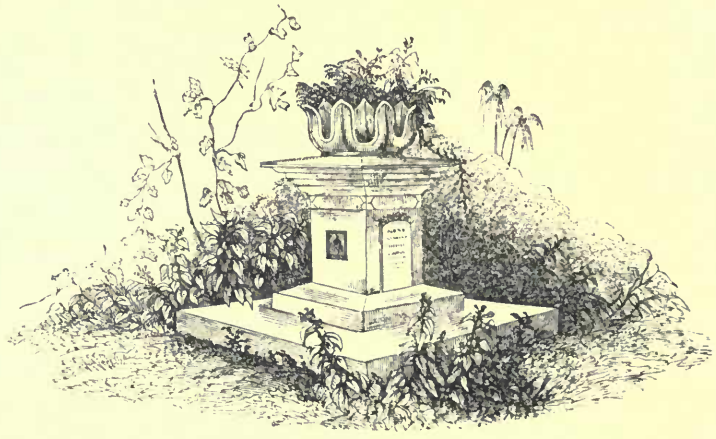
She was, agreeably to the notice, sold at public sale for three thousand seven hundred dollars. To part with this vessel was unpleasant on many accounts; for she had been daily, for nearly four years, my first and last thought. The attachment I had felt for her was great; the efficient aid she had occasionally afforded in the performance of my duties, caused me to value her highly; and as a vessel of her class, she was almost faultless.

By the 25th of February, we had completed filling our water, which is here conveniently supplied by tank-boats; and having obtained for the passage home all the stores we needed, except bread, we made every preparation for sailing.

In consequence of the short supply of the latter article, I determined to touch with the Vincennes at the Cape of Good Hope; while the two brigs were ordered to stop at Rio Janeiro, for the same purpose, as well as to obtain some further observations, and additional specimens of natural history.

In the evening, we took leave of our worthy consul and his lady, who had afforded us every facility for procuring information as well as amusement, to render our stay agreeable, and to whom I now tender my own thanks, as well as those of the other officers of the Expedition.

At five o'clock on the morning of the 26th, I took advantage of the land-breeze, and made signal to the Porpoise and Oregon to get under way.



GENTOO MONUMENT.

CHAPTER XI.

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CHAPTER XI.

CAPE OF GOOD HOPE.

1842.

After leaving Singapore, I determined to pass through the Straits of Rhio, a route which I deemed the shortest and best for vessels bound through the Straits of Sunda. We had light winds and rain-squalls at the entrance of the strait; but towards the afternoon we were favoured with the northeast breeze, which carried us rapidly onward. At night I anchored, wishing to examine more particularly the charts extant, and to make what corrections I might deem necessary.

The next morning at daylight we again resumed our route, but in consequence of fog were obliged to anchor off the Dutch factory at Rhio, where a fort is established. This was first occupied in 1824, after the cession of Malacca.

The island contains but few inhabitants, and those few are not inclined to come under the Dutch authority. From all I could learn, there is very little inducement for a vessel to resort here for trade. The island is considered extremely unhealthy for foreigners during several months of the year.

When the weather cleared off, we again passed down the strait, and on our arrival off the southern point of the islands, we steered for the east point of Lintin, which island we passed on the 28th, on our way to the Straits of Banca.

On the morning of the 1st of March, we approached the northern entrance of the Straits of Banca, and got a view of these low and uninteresting coasts.

The same afternoon, we fell in with a barque, under Dutch colours, which refused to answer our hail as we passed; we immediately wore

ship, and fired a shot; upon which they let fly all their halyards and sheets. A boat was sent on board with an officer, who discovered that she was manned by Malays, and that no one on board could speak English; however, he managed to understand that they were from Palambam, Sumatra, and bound to Singapore. Soon afterwards, we saw the Dutch establishment of Mintow; it is situated on a knoll, at the northern end of Banca, and had the Dutch flag flying over it. The greater part of Banca is low land; the northern end particularly so. There are, however, a few detached hills, of considerable altitude, which serve as sailing-marks during the passage through the straits. The southern end of the island rises, and appears to be of a different formation from the other parts, as its soil is thickly wooded. In the forest were seen numerous clearings, where people had been and were then burning charcoal, to obtain fuel for smelting the tin ores. The principal mining district lies towards the southern end of the island, in the swampy flat land at the foot of the isolated hills before mentioned. The ore is usually found at the depth of from six to twenty feet from the surface, in layers that run horizontally for two or three miles; these vary in thickness from six to twenty inches, and consist of heavy granulated particles, of a dark metallic lustre, mixed with white sand. The strata above the vein consists of vegetable mould, red and white clay, intermixed with pebbles of white quartz, and white sand, like that which is found with the metal. A stratum of steatite is said to be found underlying these ores of tin.

The process of working these mines is exceedingly rude; both Malays and Chinese are employed in them, but the latter are preferred on account of their greater perseverance and industry. I was told at Singapore that the amount of tin derived from Banca by the Dutch, was not half so great as that obtained while it was under British management, or that it is still capable of yielding. The ore is washed after its removal from the veins, which separates the earth, and leaves only the metal and stones; the last are separated by hand, and the metal is then smelted: to effect this, huge piles of alternate layers of ore and charcoal are formed; the fused metal escapes into a hole dug in the ground, from which it is dipped and poured into moulds, forming, when cool, the tin of commerce. Tin ore is found at Banca in great quantities, but its quality is inferior to that obtained from other places; and it rarely yields more than sixty per cent. of pure metal. The process of smelting is but seldom performed, generally not oftener than once or twice a year. Rude bellows of various forms are used in kindling the smelting fires; some of these are composed of large wooden cylinders with moving pistons, which give a

strong continuous blast; others are nothing more than a bamboo tube, through which the breath is forced upon the flame. The process for working the mines and extracting the metal from the ore, are similar in all the mining districts, and differ but little from those employed when the mines were first opened.

The Sumatra shore of the Straits of Banca is low, and appears to be covered with a dense forest. During the night we were visited by a heavy storm of thunder and lightning, with much rain. The next morning being pleasant, we got under way again, and passed rapidly through the straits; the southern outlet, however, called the Lucepara Passage, was not attained until nearly dark, and before reaching it we crossed many shoals, so near the surface as to leave but little water under our keels. An English vessel in advance of us hoisted a light after dark, and by taking it for our guide, we succeeded in passing through safely. This vessel was soon overtaken by us, and proved to be the barque Java, Lewis master, thirty-eight days from Batavia, and bound to Singapore. Having lost twelve of her crew by dysentery and but few of the survivors being able to perform their duty in consequence, she was returning to Batavia. The surgeon was sent on board, and the necessary medicines, &c., of which they were in great want, were supplied.

During the 2d and 3d of March, we had cloudy weather, with some rain, and at nightfall on the latter day, anchored near the Two Brothers. During the night, George Porter died. He was buried next day with the usual ceremonies. We got under way again at an early hour in the morning, and at evening found ourselves off North Island, near which we anchored. During the night we had lightning, thunder, and rain.

The next day we arrived off Hout's Island, at the entrance of the Straits of Sunda, when, the wind dying away, we were left at the mercy of a strong current setting in towards the island. To avoid danger we anchored, and lay until the turn of the tide; we afterwards passed round Zutphen's Island and Hog Point, anchoring for the night off Rajah Bassa.

As far as my experience goes, I can testify that Horsburgh's directions for the Straits of Sunda are safe and good, although perhaps not the most suitable for our navigators, for he makes the safety of the ship his principal aim, and gives directions so to navigate a large class vessel as to insure it; whilst my countrymen, although they always read him, are not disposed to pursue his directions exactly, believing that in following his advice more time is lost than a regard to sufficient

safety demands. Although such may be the case, it ought not to lessen the gratitude that navigators owe him for his East India Directory, a contribution to nautical information that cannot well be surpassed, either for general accuracy, or as regards the great number of satisfactory directions that it contains.

On the morning of the 6th, we again got under way, the men exhibiting their joy in taking this first real step on their homeward course, by running up the anchor quickly to the bows, and by the alacrity with which they performed their other duties. With a light wind from the eastward, we stood into the Indian Ocean, between the islands of Pulo Bessy and Crockatoa; the day was a delightful one, and being Sunday, when no unessential duty was performed, there was leisure to enjoy it. After divine service, the wind shifted to the northward and westward, and towards night we experienced severe squalls from that quarter, accompanied by lightning and torrents of rain. In the intervals between the gusts, the wind blew freshly, and on the morning of the 7th we found ourselves fairly launched on the blue waters of the ocean, pursuing rapidly our homeward course.

We were now truly on our route for home, and finding that the brigs detained us by their slower rate of sailing, I determined to part company with them, having some days previously given them directions what course to pursue in such an event: these will be found in Appendix XIV. We accordingly made all the sail that could be carried, and soon left them behind us. As we proceeded to the southward, the wind gradually hauled to the westward, and continued blowing strongly from that quarter until the 10th, on which day we reached the latitude of 14° S., and longitude 100° E.

The 11th was the first fine day since our departure from the straits; and on this day we had some slight indications that we should be favoured with the trades. On trying the temperature of the water, one hundred fathoms deep, we found it to differ from that at the surface only six degrees.

On the 12th, we had reached latitude 17° S., and longitude 98° E. The weather was now delightful, and we experienced the long swells of the ocean from the southward and eastward, together with moderate breezes from the same quarter. I determined now to run on that parallel of latitude; for I believed, judging from my experience in other seas, that steady trade-winds were more likely to prevail on it than farther to the southward.

On the 13th, we overtook an English barque. At this time, the crew began to be affected with catarrhs and influenza, and thirty-

eight were reported on the sick-list. These affections were imputed to the damp and wet weather which we had experienced after leaving the Straits of Sunda.

As we were making our passage across the Indian Ocean in those months during which hurricanes most prevail, some little anxiety was felt on this account; and as we neared the longitude of the Mauritius, the appearances of the weather were carefully scanned. On the 16th, signs of a change in the weather were evident; there was also a fall in the barometer, and we encountered a heavy and rising swell from the southward and westward, which continued for about seventy miles. So well defined were the waves, and so large, it satisfied me they were caused by a violent gale blowing at no great distance from us. On the 17th, we passed for fifty miles through swells from the southward and eastward, and of the same character as those seen on the day before. I made many endeavours to measure the velocity of these waves, and their altitudes, and found the former to be from twelve to twenty miles per hour, and the latter about eighteen feet: I was not satisfied, however, that these measurements were quite accurate, nor was there sufficient opportunity to render them so.

On the 20th, we had fine weather until noon, at which time the wind shifted to the northward. This change was accompanied by a fall of the barometer, and every other indication that we were about to experience one of the phenomena peculiar to this ocean. Every preparation was made to encounter the bad weather whose approach the wind and sea indicated. The barometer gradually fell from 30 inches to 29·89, ·85, ·83, ·81, ·80, ·79, in six hours; it then remained stationary for three hours, afterwards rose one-tenth of an inch, again fell to 29·79, and remained at that height for more than twenty-four hours. During this time the sea changed its direction, and set heavily from the westward, causing the ship to pitch deeply. We had a light wind from the same quarter for several hours, which afterwards veered to the southward and eastward, enabling us again to lay our course. The height of the waves last spoken of, as determined by a mean of several measurements, was about twenty-three feet, and their mean velocity about twenty-five miles per hour; but some of them, which I lost the opportunity of measuring, were certainly higher.

On the 23d, Benjamin Vanderford, master's mate, died. During the cruise, I had often experienced his usefulness, and now regretted his loss. He had formerly been in command of various ships sailing from Salem, and had made many voyages to the Feejee Islands. During our stay there he was particularly useful in superintending

all trade carried on to supply the ships; he always proved himself a good officer, and was one for whom I felt much regard. As sometimes happens, he had a presentiment of his own death, and had long been impressed with the opinion that he would not survive to return to his country. His death produced a great impression upon Vendovi, for Mr. Vanderford was the only person with whom that chief could converse, and a sort of attachment had sprung up between them, arising from the officer's long residence with Tanoa at Ambau, and his familiarity with the manners and customs of the Feejee Islands. Besides, Vendovi looked forward to his becoming a protector on their arrival in the United States. While conversing with Mr. Vanderford, some time before his death, he expressed his willingness to take charge of Vendovi, and to befriend him on our arrival at home; for, although the Feejeeans had despoiled him of all his property, they had nevertheless saved his life, and for that, or rather for refraining from devouring him, he felt some gratitude, and would have shown it to Vendovi.

Poor Vendovi could not be persuaded to look at his friend's corpse; his spirits evidently flagged; a marked change came over him; and he no doubt felt as though he had lost his only friend. His own disease, henceforward, made rapid strides towards a fatal termination, and he showed that such was the case by his total disregard of every thing that passed around him, as well as by his moping, melancholy look. On the 24th, the remains of Mr. Vanderford were committed to the deep, with the usual service and honours. The same day we experienced a current to the northwest; and the crew, after having been for ten days afflicted with colds and influenza, began rapidly to recover.

On the 25th of March, we reached latitude 23° S., and longitude 68° E., and enjoyed, until the 30th, delightful weather and strong trades, enabling us to make two hundred and fifty miles a day. On the latter day we overtook and spoke the ship Clarendon, of Boston, from Canton for New York. On the 2d of April, a strong current was felt setting towards the northwest; on the 3d, it was found to set west-northwest. We had squally weather on the 4th, accompanied by frequent lightning, thunder, and rain. This storm lasted for three hours. We then ran out of it, having fine weather again, and a clear sky overhead; leaving as it were behind us the storm, which seemed to occupy half the firmament, with many beautiful and well-defined rainbows. I was told, at the Cape, that this phenomenon of the sky half covered with clouds, was frequently seen by those dwelling there, or navigating the seas in its neighbourhood; and, on its occurrence,

those in a proper situation never fail to witness the same series of beautiful and well-defined rainbows.

We were again affected by currents on the 5th; and they showed themselves in the formation of the short rough sea which we encountered. The deep-sea soundings on that day gave remarkable results; for, while the temperature of the water at the surface was 73·5°, that at a depth of one hundred fathoms was 78°; although this may seem somewhat singular, it may be accounted for by the circumstance that we were within the influence of the tropical currents setting to the southward along the eastern coast of Africa.

On the 6th, experiments on the temperature of the water gave similar results, although the difference between the surface temperature and that at one hundred fathoms depth was not so great as on the previous day, the former being 75·5°, and the latter 78·5°. The ascertained set of the ship by current this day was south half west, forty miles. At noon the current was found, on trial, to flow in the same direction, but with a velocity of not more than half a mile per hour.

The ship continued to be tossed about most uncomfortably during the 7th, and the current set us fifty-three miles in a west-southwest direction. We passed close to the edge of the Aguillas Bank, where the temperature of the surface water rose to 78°, and continued so until 5 P. M., when the water became discoloured, and it fell to 73°; we then obtained soundings with sixty fathoms of line on dead coral. During this time the temperature of the air had not been higher than 70°. In order to examine the temperature of the warm stream that we were passing through, I shaped a course nearly at right angles to the direction of its flow, and while sailing sixty miles made the following observations:

At noon, the temperature of the surface was			78°
" 1 P. M	"	"	78
" 2 "	"	"	78
" 3 "	"	"	77
" 4 "	"	"	75
" 5 "	"	"	73
" 6 "	"	"	69
" 7 "	"	"	68
" 8 "	"	"	66

At the time of the last observation the temperature of the air was 68°.

On the morning of the 8th we had soundings in sixty-nine fathoms water; the direction and velocity of the current was tried by anchoring a boat. The direction was found to be S. 56° W. (true), and the velocity to amount to three quarters of a mile per hour. During the last twenty-four hours the current had set us thirty-three miles, and in

the same direction as that shown by our experiment. A trial of the temperature at the bottom was made with the deep-sea thermometer, and was found to be 56½°; while at the surface it was 69°. The land to the westward of Algoa Bay was now in sight, and it was not a little remarkable as we came on soundings how soon we passed into a smooth and quiet sea, from a rough and tossing one, exhibiting all the turbulent characteristics that are caused by the meeting of powerful currents.

On the 9th, the wind being contrary, we continued standing in towards the land, and in the afternoon were not more than ten miles from the coast. The temperature of the air and water was 68°.

The next day the wind blew from the same direction, and as the weather was fine, I determined to stand off to the edge of the bank previously spoken of, in order to obtain the assistance of the current running there, to carry us to the westward. At 4 P. M. we tried the set and velocity of the current, on soundings in eighty-five fathoms water, and found its direction to be east-northeast; its rate, a quarter of a knot per hour. During the last twenty-four hours, while on soundings, the set of the current was thirty-three miles N. 62° E. At 6 P. M. the temperature of the water changed from 67° to 75°, and with this variation of temperature, we found we were again entering the turbulent sea. In the tacks we made, off and on, the temperature rose and fell during each of them, several degrees, and the turbulent and smooth water formed a well-defined line.

On the 11th, we still continued in the rough water; the temperature at the surface being 75°, but that at one hundred fathoms depth was only 65°; with two hundred and fifty fathoms of line, there were no soundings. In the evening the water became remarkably phosphorescent; in fact, to a greater degree than I had ever previously observed, except at the Cape de Verde Islands, while on our outward voyage. After we had passed the pitch of the Cape, the direction of the current was found to be changed, having set us, in twenty-four hours, forty miles, on a course N. 40° W.

I am satisfied that the use of thermometers would be beneficial to those navigating around this Cape; for by keeping in water of a temperature above 70°, they would, although exposed to a rougher sea, be carried more rapidly around the Cape, and would discover that they had passed it by encountering the cold water which is flowing rapidly to the northwest. In fact, it is obvious to me that the anomalies of current and temperature existing in this neighbourhood, can only be accounted for on the hypothesis of an upper and under current of different temperatures. The former of these is the warm, the latter

the cooler one: but for a more particular explanation of this subject, the reader is referred to the diagram map, and the chapter on currents and whaling.

On the 12th of April, we arrived off False Bay. The temperature of the surface water was reduced to 64°, and the current was setting us rapidly to the north-northwest. The fog and mist that now prevailed, prevented my observations for ascertaining the rate of the current from being as accurate as I desired; the results, such as they were, gave it a velocity of more than a mile per hour.

On the 13th, no observations could be obtained on account of the fog and mist; and our situation became rather a perplexing one. On making trial of the current, we found that it was drifting us to the north at the rate of eighteen miles in twenty-four hours. Soundings were obtained in eighty-five fathoms. The temperature of the surface water fell to 54°. Towards evening it cleared up, and our situation was obtained by bearings, which placed us off Snake's Head, about twelve miles to the southward and westward of the Lion's Head. Believing that my only chance of making Table Bay was by keeping as close to the shore as possible, I kept the ship on soundings during the night, and at daylight stood in through a thick fog for what I felt sure must be the position of Green Point. While under way, we fell in with a fleet of small fishing-boats lying at anchor. Their crews were catching a species of bass, as fast as they could haul in their lines. Immense numbers of birds, such as albatrosses, petrels, and gulls, surrounded the boats, and were feeding on the small fish and offal thrown overboard from them. The fish caught here are salted, and being afterwards dried, furnish no inconsiderable portion of the food of the lower orders of the colony. One of the fishermen was desired to come on board, and after he had satisfied me that some reliance might be placed in him as a pilot, he was retained with us. Under his guidance we stood on, and as the fog began to break away reached our anchorage, having passed close to the lighthouse and Green Point, the western point of Table Bay. The captain of the port, Commander Bance, R. N., boarded us soon after we had anchored. I was glad to see this gentleman, to whom I felt under obligations, for civilities and kindness shown me some eighteen years previously, during a cruise off the coast of Peru.

An officer was despatched by me to call upon, and report our arrival to Sir George Thomas Napier, governor of the colony.

The falling of the ball at the Royal Observatory afforded us an opportunity for comparing the time as shown by our chronometers

with that of the Cape. Of this we took advantage, and found that our time-keepers had performed well.

Much to my regret, our consul at this place, Isaac Chase, Esq., was confined to his house by sickness. I anticipated detention from this cause; but on visiting him at his residence on Green Point, I was informed by him that he had already made arrangements through the house of Bordelaise, Thompson & Pillars, for supplying all our wants as soon as possible.

The view of Cape Town and its vicinity from the anchorage, is remarkable, and the whole seems novel. Directly in its rear rise the perpendicular sides of Table Mountain, while on either hand are seen the crags of the Lion's Head and Devil's Peak; the former usually overhung by a large cloud, which often covers the whole town with its broad shadow. These mountains are composed of a dark reddish-gray sandstone, and excepting immediately at their base, and close to the rear of the town, show but little signs of vegetation. Here and there pretty straw-coloured cottages are scattered among the foliage.

The anchorage, which is at some distance from the beach, was, at the time of our arrival, occupied by a large number of vessels, which somewhat surprised me, for at this season of the year the bay is often visited by northers, which have in former years done much damage, and caused the loss of many lives. I was informed, however, that but little apprehension is now felt on their account, for ships are at the present time well provided with chain cables, and can hold their ground. Two quays extend from the beach into the bay, affording facility to lighters to discharge and take in their cargoes at all times of the tide.

The town itself shows many traces of its original occupants. The houses, with their prim little stoops, porches, and gables to the street, reminding me strongly of those built by the early settlers of New York and Albany. But few of the streets have any sidewalks, and many of them are not paved at all, causing them, in consequence of the arid climate, to be ankle-deep in dust. Nine-tenths of the inhabitants still retain a Dutch look, and many of them are unable to speak any other than their original language, while to a large number of them the epithet "boors," so commonly bestowed, is quite applicable. The town is laid out with regularity, many of the streets crossing each other at right angles, and some are of respectable width. Rows of oak, poplar, and pine trees line the sides of the principal avenues. Many contain shops, which are well supplied with the usual varieties of European goods. Roses and vines are cultivated in front of the

houses, and their blossoms and fruit, although within reach of all, are respected. The houses are painted of various colours, without any regard to taste, and are of a clean though antiquated appearance. No two of them are alike, yet their styles are so marked, that the country whence their builders came may be judged with tolerable certainty from each. Badly-painted signs are as numerous as in our own country, and vanes pointing in every direction surmount the gables. The Dutch costume still prevails among the inhabitants, and afforded us much amusement. In the schools the Dutch language is still taught; though in many the English is a branch of education. Considering the number of years that this colony has been under the British dominion, it surprised me to find that a knowledge of the Dutch was much more necessary than that of English, while dealing with the inhabitants.

There are two hotels in Cape Town, the Royal George and the Victoria, both kept on the English plan. The former we frequented during our short stay, and found it comfortable, although far inferior to what might have been expected from the size of the town.

The Cape of Good Hope was originally settled by the Dutch in 1652; captured by the British in 1795; restored again after the peace of Amiens in 1802; again taken possession of in 1806; and finally ceded to Great Britain in 1815. During its occupation as a Dutch colony, it had twenty-eight governors, and since it has been under British rule it has had eighteen. By this it will be perceived that the changes in its administration have been frequent, and what might naturally be expected to follow, the policy and character of its governors have been vacillating. It has been generally ruled very much after the ideas of those who presided for the time being. The government is nominally vested in the governor, and an executive and legislative council, who are all appointed by the crown, or with its approbation and consent.

Under this system of government it has been the misfortune of the Cape colony to be placed; and the advantages it has possessed under some, have been counterbalanced by others, and not unfrequently the salutary regulations made by one, have, without any apparent reason, in the minds of the colonists, been annulled or set aside by others; which, of course, has tended to foment discord and produce a feeling of opposition to British rule: this has prevented the advancement of the colony, and retarded its usefulness by giving license to crime that otherwise would not have existed.

Of late years, however, although the government still remains the same, yet they have been more fortunate in the individuals who have

presided over it. In regarding the British colonial system, it appears remarkable that the British nation, generally so mindful of political rights, should place it in the power of distant governors to rule their colonists with almost despotic sway, and their growth and rise to be at the option of any one individual, who may arbitrarily crush or paralyse the efforts of industry and the developement of resources. Many of the inhabitants of the Cape complain of this polity, but look forward to the adoption, in the course of time, of an elective legislative body, which will give them some share in the government, and prevent not only misrule, but undue taxation and a misapplication of its funds in the various improvements which government may authorize.

The executive council consists of seven members, including the governor, who is the presiding officer; and the legislative council of thirteen, composed of the members of the executive council and five additional unofficials, who are themselves residents of the colony, named by the governor, and appointed by the crown.

The same kind of government may be said to exist now as in New South Wales, of which I have had occasion to speak when treating of that colony; and it is thought to be equally inefficient, and to require reform.

One of the circumstances that had agitated the respectable portion of this colony, has been the publication of the authentic Cape records. Many entered warmly into the scheme at first, but it was soon perceived what the developements were likely to be, and that many who had played a conspicuous part in the history of the colony, were about to have all their public as well as private acts brought to light; and this has raised a strong opposition to the continuance of the publication. The editor, Donald Moodie, Esq., in the year previous to our visit, made an appeal, stating the difficulties that he had encountered, and adding, that he would in consequence be obliged to give up the task. Some of the numbers were sent me by a friend, which I took the more interest in perusing, as exhibiting the history of the tribe of Hottentots, which may be now deemed almost extinct, so far as the civilized and settled portions of the colony extend. Many disreputable actions on the part of all those who have been engaged were here exposed, and I am not at all surprised that the official incumbent, as well as others, should exert all their interest to effect its suppression; however, as many of these statements are now before the public, it would be desirable that they should be gone through with, that there may be a full understanding of the transactions that have now come to light, in order to have a full knowledge of the state of the affairs of the colony, as well in relation to the governor as to those who have

been employed under the governmental authority, whether missionaries or officials. Like the secret details of all colonies, they will show a great deal of misrule, inhumanity, and want of system, in the conduct of affairs. The opposing interests are such that the whole will probably be exposed. The colonists, on the one side, feeling themselves unjustly charged with cruelty and persecution of the unfortunate natives, desire that all the investigations that have taken place may be brought before the public; while, on the other hand, those who are or have been in any way connected with the government, are, from all accounts, disposed to the suppression of this documentary evidence. Were I desirous of showing the dark side of the picture, I might insert here a few extracts that would startle the many who now boast of their philanthropic action, and are disposed to condemn the actions of others in regard to slavery, who are, in comparison, far less guilty of wrong to the interests of humanity. Those who are disposed to look further into these subjects, may consult "Specimens of the Authentic Records of the Colony of the Cape of Good Hope, relative to the Aboriginal Tribe; together with an Inquiry into the Justice and Expediency of publishing the remaining portion of those Records, by Donald Moodie: Cape of Good Hope, 1841."

On the morning after my arrival I called on his excellency the governor, at the government-house, where I had the honour of an introduction to Sir George Napier. His reception was kind and frank. With him I passed a pleasant half hour. Sir George is one of the heroes of the Peninsular War, and bears the marks of his activity in those well-contested conflicts, in the loss of an arm. He showed me over the apartments, which, however, are not now occupied, as he was living at his country-seat. They appear convenient, and afford from the windows a view of the government demesne, which is quite pretty, planted as it is with fine old oaks; part of it is kept as a public walk, which the citizens frequent on holidays in large numbers. The Cape station has never been a popular one, from the want of society; but of late years very many persons from India have made it a resort for the recovery of their health, and in a measure supplied the deficiency in this respect. The offices for the transaction of government business are in the immediate neighbourhood of the government-house, and within the precincts is also a college for the education of the youths of the colony; it has several professors, but I understood all those who desire to have their children well educated send them to England.

The barracks are extensive, and well built, and have a large area in front as a parade-ground. There are several other buildings going

up, for the accommodation of the troops and hospitals for the sick, all handsome and well situated. I regret to say that as much cannot be said for the town prison, nor for the buildings appropriated to the police department, custom-house, and harbour-master's department: all these bear the marks of what Cape Town was, and stand in strong contrast to the modern improvements.

Formerly the municipal government of Cape Town consisted of a president, four members, the town treasurer, and a secretary. The president was elected for two years, and was succeeded by the senior member of the board. This board was dissolved, apparently for no sufficient reason, for every one was satisfied with its usefulness in controlling the various duties appertaining to a corporate body.

The town is now divided into twelve districts, and each district into four wards, over each of which there is a commissioner, and four ward-masters, chosen by the people. The first form the upper board, and the last the lower, and each have a chairman and deputy chairman, who, among other duties, act as appraisers of property, on which the taxes are assessed equal to three-quarter pence in the pound. By the statistical tables published, it appears that the valuation of property of Cape Town reaches the sum of one million six hundred and thirty-six thousand pounds.

The municipal regulations now seem to be excellent, and are more or less under military control. The police has been organized on the plan of the police of London, and its efficiency is highly spoken of. From all the information I could gather, crime has very much decreased in both the Cape district and colony. The statistics of crime show but few cases. The quarterly sitting of the grand jury took place during our visit, and there were but six presentments, viz., one for culpable homicide, two assaults with intent to harm, one robbery, one theft, or receiving stolen goods, and one fraudulent insolvency; and this within a district containing fifty thousand inhabitants.

There are great complaints about the administration of the laws of the colony; the English system now prevails so far as to allow counsel to the criminal. The trial by jury is established; seven of the twelve must be present, and it requires a majority of these only to convict; if more than seven are present, and the jury are divided equally, the prisoner is acquitted. The Dutch criminal code formerly in force has been modified by the English, so far as respects some punishments; torture, for instance, has been done away with. The crimes of murder, high treason, counterfeiting, and rape, are punished with death; thefts of large amount, assault, robbery, and the like, are punished by trans-

portation; while, for other and minor crimes, the prisoners are employed as convicts on Robben's Island, working in the quarries; for less offences, flogging and imprisonment are inflicted.

On the other hand, the English civil law has been modified by that of the Dutch: this has increased litigation, in consequence of the absurd manner in which boundaries were formerly laid off; such, for instance, as estimating by the distance a man could walk in a hour, or canter with his horse.

Another source of complaint, which amused me not a little, was the administration of justice by a supreme court, over which a chief justice and two puisne judges preside; two of these are English, while the third is a Scotchman; the consequence is, the English judges administer the law after the English code, while the Scotch judge follows that of Scotland, which often renders the decision diametrically opposite: and it is impossible for the advocate or client to know by what judge or law his case is to be tried. It was said, I know not with what truth, that high connexions have been considered more suitable qualifications for the office than legal knowledge. The salaries do not exceed fifteen hundred and two thousand pounds annually.

There are in the Cape colony eight districts. Each of these is governed by a commissioner or civil magistrate, who is assisted by justices of the peace. These districts are again subdivided into veld cornetcies. The cornetcies are governed by a petty magistrate, who is called a veld cornet. These extend over a distance of about twenty miles, and under him is organized the militia force, in case it should be called out. It is the duty of the latter to meet the requisitions of the higher government officers for supplies, &c. There is little liberty allowed the inhabitants of the districts, who are restricted from all acts that might in any way tend to give expression to their sentiments; not even are they allowed to hold a public meeting, and all kinds of prosecutions are referred to the capital for final decision. At the Cape they have a vice-admiralty court for the trial of offences on the high seas. The commissioner of the district, and others holding office, are appointed under the great seal, who are each empowered to grant licenses of marriage, and do other civil acts, and have associated with them the justices of peace, as well as the veld cornets.

The taxes are represented as being onerous; there is, for instance, a capitation tax of six shillings annually, on all free males and females, above the age of sixteen. Those in the employ of the government are exempt, as well as the servants attendant on them. Horses and carriages of all kinds are taxed from two to four pounds. There is a tax on all incomes exceeding thirty pounds, of two per cent.; in addition

to these are the stamp duties, water taxes, house taxes, auction duties, market duties, tithes on wine and grain, in short, on every thing that is sold; all papers executed, transfers of property, promissory notes, bonds, and licenses of all kinds; indeed, it would be difficult to mention any thing exempted from the all-pervading taxation which here prevails. On inquiring the cost of articles, it is invariable to account for the price, by adding that the article is taxed. The people are even taxed for permission to leave the colony; and I was told it was necessary to pay a tax to take a bath.

The whole revenue raised amounts to £130,000, and the expenditures do not exceed £125,000.

In order to lessen the weight of the taxation, it was in agitation at the time of our visit, to increase the duties on imports, which are about three per cent. ad valorem, on English articles, and ten per cent. on foreign goods.

The circulation is a paper one of the denomination of rix-dollars, valued at one shilling and six-pence. There are no notes less than twelve rix-dollars, equal to a pound. The monetary concerns of the colony have undergone many vicissitudes, and numerous experiments have been made, all tending to produce a want of confidence. Government, until within a few years, had the entire control of the discount banks, and through them possessed a full knowledge of the affairs of men in business, and it is said did not fail to use it in an arbitrary manner, producing revulsions in the monetary affairs of the colony that were highly prejudicial to the commercial community, causing much distress, and in some cases ruin, of which many feel the effects to this day.

This state of things gave rise to the establishment of banks exclusively under the control of private individuals: there are two of these corporations, bearing the title of the "Cape of Good Hope Bank," with a capital of £70,000, and the "South African Bank," whose capital amounts to £100,000; the capital of each is all paid in, and no part of it can be withdrawn. The latter is not a bank of issue. A general statement of their affairs is annually made to the proprietors. Interest is paid on deposits remaining longer than a certain specified time. Inviolable secrecy is observed with regard to individual accounts, and each person connected with the institution signs a promise to that effect. These banks afford every facility within the bounds of prudence to those dealing with them, even carrying the spirit of accommodation so far as to keep early hours for the benefit of the agriculturists who frequent the market.

This new system is found to work admirably, and pays handsome

dividends to the proprietors. It gratified me to learn that the public of Cape Town is chiefly indebted to Isaac Chase, Esq., the United States consul, for the adoption of this banking system. I had many interesting conversations with him on the subject, and also conversed with others, inhabitants of the colony, who expressed themselves highly pleased with the success of these institutions, while at the same time they acknowledged their obligations to our commercial agent.

Wine is the great staple of the colony; but many of the vine-growers have been ruined, in consequence of the vacillating policy pursued by the home government, with regard to this branch of industry. Trusting to the promises made by the government, a vast amount of capital was invested in the business, and the annual production was in a short time tripled. This state of things continued for about ten years; but in the year 1825 a change of policy took place, and the protection was diminished more than one-half; and at the same time a further reduction was proposed in the bounty. As a natural consequence, a depreciation in all the wine estates took place, and the loss of much property ensued. This was made more unpleasant to the Cape colonists by a proposition to put a duty on Cape wines, that would have the effect of placing them at a higher duty than those of foreign wines. The colonists are still very sensitive upon the subject of wine, and the treatment they have received; not only have they to complain of bad faith on the part of the government, but the constant efforts of others to decry their wines, some of which are produced of as fine a quality as those in any other part of the world; but there is some foundation for the disparaging reports that have been circulated, for quantities have certainly been sent abroad that had been very much adulterated.

The Cape colony, both as to soil and climate, is well adapted to the raising of all descriptions of wines, from the light German and French, to those of Madeira and Sherry.

In consequence of the reverses the colonists have met with in the wine trade, they have begun to turn their attention to the raising of sheep; the colony has been found to be well adapted to those producing fine wool, and the investments that have been made in them bid fair to be profitable.

Wheat and maize are also cultivated, particularly on the mountains near the Cape, where these grains grow in great perfection, and are raised in sufficient quantities to meet the consumption of the colony, and to be exported in considerable quantity to the Mauritius. The wheat now used is of a hard and flinty kind, and effectually resists

the attacks of insects, as well as the rust, which were formerly troublesome.

The other chief productions are fruit, oil, and provisions.

One great obstacle is opposed to this colony ever becoming a great producer of wool, and that is the immense distances and the almost total want of communications. So bad are the roads and so great the hindrances that the wonder is, not that there is so little internal trade, but how transportation is effected at all. Were it not for the energy and perseverance of the early colonists, and the hardy breed of cattle that they possess, communication between distant parts of the colony would be nearly impossible. Some opinion may be formed of the state of the roads and the difficulties to surmount, by the fact that fourteen pair of oxen are frequently attached to a small wagon.

The ox used in Africa seems to me to be of an entirely different breed from the animal we are accustomed to see in our country. Their legs are much longer in proportion to their bodies, lank and bare-boned, with immense horns; and their gait, instead of a slow walk, is often a trot.

The whole of the foreign trade of the colony passes through Cape Town. The value of imports is estimated at one and a half millions sterling, and that of exports amounts to upwards of a million. The vessels engaged in this trade number about six hundred, whose tonnage amounts to one hundred and eighty thousand tons. The total revenue from customs, in the year 1840, was forty-two thousand eight hundred and seventy-seven pounds. The exports consist of wine, wool, ivory, whale-oil, hides, tallow, and aloes. These are either brought to Cape Town from the interior in wagons, or in small vessels from Algoa Bay. They are sold by auction, in the market-place, every Saturday. This mode of effecting sales is almost universal. The services of auctioneers are of course in request, and in addition to their legitimate trade they receive deposits and make advances on merchandise committed to their charge. The government taxes on sales by auction amount to a large sum, and no article can be sold unless a tax is paid; for any infraction of this law there is a heavy penalty, to be collected by the market-master, who is appointed by the government, and who superintends the collection of the dues according to a tariff which is published.

There is a great want of labourers in the colony; and since the abolition of slavery, this scarcity has very much increased, for it is found that those who have been manumitted are not disposed to work more than is necessary to provide themselves with food. The attempt has been made, and arrangements I believe were in progress, or con-

templated, to bind as apprentices the captured slaves brought into the island of St. Helena, to those who were willing to receive them, at the Cape of Good Hope. The governor of St. Helena, Colonel H. Trelawny, was well disposed to this plan, and it was understood was co-operating with the authorities of the Cape to carry it fully into effect. Five years is to be the term of apprenticeship. However much the authorities incline to this plan, the wisdom of it is much doubted by a large number of the inhabitants of the colony, who allege, that although it may answer the purpose of giving relief, yet this benefit will not be permanent, and in a few years they may be overburdened with a population of blacks, who will be little inclined to labour, and may be a great impediment to the introduction of a class of free labourers, who might be permanently beneficial to the towns as well as to the interior.

In the inhabitants of Cape Town, although one sees a great variety of costume and figure, yet a true Hottentot of full blood is said to be but rarely met with. Some, indeed, were pointed out as such; but, although they seemed to have the distinguishing marks that are generally impressed upon us as characteristic, yet on further inquiry they did not prove to be really so. The wood-cut gives a good idea of those seen at Cape Town.

HOTTENTOTS.

The men are represented as being very much attached to their sheep-skin cloak or caross. Those that we saw were remarkable for

very high and prominent cheek-bones and a sharp chin; they are not much inclined to steady employment: the attending of cattle, and the indolent and wandering life in which they pass their time, suit their disposition. They at times hire themselves out to the farmers, receiving cattle as wages. In the colony they do not bear a very high character for honesty and faithfulness. They are expert drivers of wagons, but are otherwise careless and inattentive. They are deemed an improvident race, though there are some instances of their showing great attachment to individuals who have treated them well. Their numbers now are variously stated; but little dependence is to be placed on the accounts given, as is evident by their ranging from ten to thirty thousand.

Upwards of thirty thousand slaves in the colony have been manumitted; but the success of these as free labourers is by no means encouraging. The cooleys or bearers have regular employment, but the great majority of these are Malays or people from India.

I had the pleasure of becoming acquainted with Mr. Thompson, the intelligent African traveller, to whom the world is indebted for his interesting accounts of the Bushmen, and the chief knowledge we have of the interior of the colony. We are indebted to his exertions, through the liberality and joint action of some gentlemen of the Cape, for the many attempts that have been made to penetrate into the interior of Africa. When the difficulties and perils of such efforts are duly considered, it is not surprising that so little success has been met with in the various expeditions undertaken with this view. To those who would wish to seek adventure, the exploration of Africa offers at present a wider and more novel field than any other portion of the world.

The colonial government has of late years had much trouble with the Caffre tribes on the eastern limits of the colony. These have frequently made incursions, and driven off the cattle of the settlers, in revenge for the injuries they have sustained from the whites. The usual result is taking place; here, as elsewhere, civilized man is driving the savage before him, and occupying their hunting-grounds for permanent agriculture. The missionaries have in some cases pushed their establishments among these savage races, and from them the accounts of the Caffres have been mostly derived. Their appearance as well as character seem to indicate a totally different origin from the negro and Hottentot tribes. One of the marked peculiarities about them, is that they avoid marrying the women of their own tribe, preferring to purchase wives from their neighbours, for whom they barter their cattle. Tamboukie women are preferred, although they

are described as very ugly, being short, stout in the body, and having strong muscular limbs.

Those who have visited the country of the Caffres, describe them as extremely hospitable, and very cheerful in their dispositions. They mostly go naked, particularly during the heat of summer, though they wear the caross of skin in the winter. Their arms consist of the spear and club, with a shield of bull's-hide to protect the person. Their principal food is the milk of their herds, which they value beyond any thing else: they are a pastoral people, and the cattle-fold is considered the great place of honour, so much so that their chiefs are always found to occupy it. They have of late years obtained many horses; formerly they used the ox for riding, and this animal is said to have been even trained by them for the race.

The part of South Africa occupied by the Caffres enjoys a delightful climate, and they, consequently, need but little protection from the weather; and their huts are rudely constructed.

Of late years the settlers at Port Natal, on the eastern coast, who are surrounded by the Caffre tribes, set themselves up as a sort of independent community, believing they were beyond the limits of the colony; they enacted laws and regulations, issued their declaration of independence, invited settlers, and for a time committed many atrocities on the Caffres. The Cape government, deeming it was advisable to check this disorderly spirit, sent an expedition to assert their proper supremacy. Troops were proceeding to Port Natal at the time of our visit.

During our stay we visited, as all strangers do, the estate of Constantia; it is situated about thirteen miles from Cape Town. There are three small estates that bear this name, viz.: High, Great, and Little Constantia. The country we passed through, although barren and sandy, was apparently well settled: the village of Wynberg is the residence of many persons who come here to enjoy the delightful air that generally blows from the eastward; most of the residences are pretty cottages, and some have the appearance of handsome villas; they all have an air of neatness and comfort about them. Oaks and the pine are almost the only trees met with, and one is somewhat surprised that even these should be found; for the country is, to appearance, a barren waste, and many miles of it are quite unproductive for agriculture. The scarlet heath, blue oxalis, and the yellow compositæ, not only enliven this waste, but give it somewhat the character of the flowery prairies of Oregon. The sandy soil looked like the sea-shore, and bears indubitable marks of having been once covered by the ocean.

The estates of Constantia lie east of the Table Mountain, on False Bay, and from their peculiar situation are adequately watered by the mists condensed by that lofty mountain. The soil of these estates is far from being rich, but is rather a light and in some places a gravelly soil. The graperies lie for the most part on the slope to the southeast, while some are situated on the low lands, which are carefully ditched to preserve them dry. They are divided into fields of some four or five acres each; the grape-vines are planted in rows four feet apart, they are never permitted to grow higher than three feet, and the whole is kept free from grass and weeds. In the spring, the vines are pruned; the grapes come to maturity in April; while they are growing, all unnecessary leaves and sprouts are removed, to give free access to the sun and air, and full advantage of the growth of the parent stock.

The grapes are allowed to remain on the vines until almost converted into raisins: they are then carefully examined, and all the decayed and bruised ones removed, before being gathered. The same process is used for expressing the grape here as at Madeira; but they have in some places advanced a step, and use the screw-press. The buildings for the storage of the wines are of one story, and arranged into three apartments; two of these are appropriated to the manufacture of the wine, and the third to that which is kept ripening for sale. The wines are of four kinds, Pontac, Frontignac, and the white and red Constantia. These are named in the order of their celebrity and price, which is usually a fixed one: the wine here is sold by the aam and half aam, equivalent to a barrel and half barrel; the cost for the last quantity is one hundred dollars for the first kind, eighty-five for the second, seventy-five for the third, and sixty for the fourth. To L. V. Renen, Esq., the proprietor of the High Constantia, we are indebted for many attentions. The grounds of Constantia were ornamented with some plaster statues of Hottentots and Caffres, which were said to represent the true type of these natives, but we had no opportunity of judging.*

I paid a visit to the Cape observatory, famous from the labours of Sir John Herschell, on the southern constellations. It is now in charge of T. Maclear, Esq., who was at the time of our visit absent, being engaged in the measurement of an arc of the meridian. His assistant Mr. Smyth, and Lieutenant Wilmot, of the magnetic observatory, showed us the instruments. Lieutenant Wilmot has four non-commissioned artillery officers for his assistants. The day of our visit

* Just previous to our departure, we were informed that some true Hottentots were in the town jail; the last place one would have thought of looking for them. The intelligence came too late to make use of it.

happened to be term-day, when an almost uninterrupted series of observations are taken; our stay was therefore but short, as I was disinclined to interrupt the constant duties of the observers. During our visit at the observatory, the weather was beautifully clear; no clouds were to be seen except over the Table Mountain, and objects viewed across the sandy plain were much distorted by refraction.

The botanists attached to the Expedition attempted, during our stay, to ascend to the top of Table Mountain; but having taken a path different from that usually pursued, they were arrested by the perpendicular wall when about six hundred feet below the top. A great collection of botanical specimens amply repaid them for their disappointment. They visited the valley between Table Mountain and the Devil's Peak, and found it to consist of a dry spongy soil, densely covered with Rutaceæ, intermixed with low bushes of Heath, Thymelaceæ, Diosmas, and Compositæ, having a close resemblance and analogy to the upland bogs of New Zealand.

The drives around Cape Town are pleasant; the one to Green Point is the most agreeable: this is a straggling village, with the houses having pretty gardens in front, laid out in the English style: the distant view of the ocean, with the heavy surf breaking upon the rocky coast, are fine objects to seaward. The sides and tops of the hills in the rear are bare of trees, but the roads are lined with Cacti of large growth, giving to the scenery a decidedly tropical character. Green Point has a municipal government, and elects its commissioner and ward-masters in the same manner as Cape Town. The light-house is within this district: it is quite unworthy of the name, being decidedly the most inferior British establishment I have seen. This surprised me the more, because there is here a great necessity for a brilliant light.

There is a Commercial Exchange at Cape Town, possessing a public library, consisting of about thirty thousand volumes, and containing a reading-room, as well as a large hall, which is used for the public meetings and festivities of the inhabitants.

Different sects of Christians are vying with each other, to carry civilization and the gospel to the tribes in the interior; but as usual, there are many who deny the purity of their principles, and spread scandalous reports concerning their operations.

The walks near the town are pretty, and kept in neat order. One that leads along the brook in the rear of the town, whose banks are occupied by hosts of washerwomen, is peculiarly picturesque; as soon as you ascend to the top of the hill, you overlook the town, bay, and

shipping, and gain a view of the sandy plain and distant mountains, with Robben's Island and Green Point in the distance.

Among the objects of interest at the Cape, is the Botanical Garden of the Baron von Ludwig. To his liberality we are much indebted for plants and seeds; and in fact every thing that our botanists desired was placed at their disposition. The garden is surrounded by a brick wall, and situated near the foot of the Lion's Rump; its soil was originally poor, but it has been much enriched by manure. The collection of plants, both native and exotic, is good, but the season of flowers was over. The native bulbs, which form the great beauty of the collections here, had passed, and but a few Amaryllidæ, and some varieties of the Oxalis, remained in bloom. Many curious specimens of African plants were noticed, particularly some Zamias, Strelitzias, Aloes, and Testudinarias. Of the former we brought home a fine specimen, whose fruit, which resembles in shape a large pine-apple, is eaten by the Bushmen, and is said to be palatable when properly prepared. The collection of East Indian plants was in fine order, and numerous specimens of the Cacti attracted our notice.

The portion of ground allotted as a flower-garden contains a fine collection of roses and dahlias, of ornamental shrubs and annuals. There is also a vegetable-garden, while fruit trees are interspersed here and there throughout the whole. The proprietor furnishes tickets of admission to all who desire them; but his rules and regulations as to the hour of entrance, and respecting the police of the garden, must be strictly observed.

The plants furnished us by the Baron have flourished admirably since our return.

Tanks of some extent have been erected by the government, to preserve water for the use of the town and shipping. I was not aware at first that any necessity for them existed, but was afterwards informed that the town has, at times, suffered severely from drought.

The climate of the Cape is usually considered salubrious, and particularly renovating to constitutions enfeebled by a long residence in India.

If one were to place full reliance on the assertions of its inhabitants, Cape Town and the surrounding country possess a perfection of climate to be met with in no other part of the world; but this, it is to be regretted, is not fully corroborated by the testimony of the meteorological registers that have been kept, as well as the experience of those who have written upon the subject. It has many peculiarities, and may be termed rather a cold climate for its latitude. The mean

temperature throughout the year is 67½°. The extremes vary 10° above and as much below the mean. It is classed by its inhabitants under the warm and equable climates; yet, notwithstanding, in many situations, it is extremely variable: the thermometer will fluctuate ten degrees in as many minutes, producing an unpleasant sensation of cold; this is owing to the chilly winds that sweep down from the Table Mountain in blasts, to equalize the density of the atmosphere rarefied by being in contact with the heated soil beneath. But little difference is observed between the temperature of sunshine and shade in free and open situations.

This variation of climate is ascribed to the winds: the southeast winds prevail for the most part of the year, and are warm; these are succeeded by the cold winterly winds, which invariably bring fog and misty weather; but in viewing the situation of the Cape with respect to the large bodies of water flowing past it, it would seem more reasonable to impute it to the warm tropical and cold polar currents of water, of whose existence we have given ample proof in the preceding pages; for if the winds were alone to be taken into account, that which comes from the southeast, in the southern hemisphere, ought to produce the cold, while the west and northwesterly winds should be warm. The sudden changes of temperature mentioned above are merely local, and often confined within narrow limits.

At our anchorage in the bay this occurrence was strikingly perceptible, not only by the thermometer but from the effect produced on our own feelings; while in the town, although the change could be felt, still it was not so remarkable. The inhabitants assert that these changes occur oftenest during the prevalence of a strong southeast wind; but my own experience leads me to believe that they take place during the night, and particularly when a calm prevails, or but a slight breeze is blowing, and indeed all the facts connected with it would lead me to the opinion that such must be the case. Although all seem to be aware of these variations of temperature, I did not learn of any observations that have been taken that could be relied on for accuracy.

Thermometers in different parts of the town, of course, give very discordant results, and all meteorological observations ought to be taken in situations as far as possible removed from the influence of these changes. The southeast winds are often so violent as to prevent communication between the shipping and the shore during some parts of the day, and often cause damage to the small boats, or to the vessels themselves. Cargoes can only be taken in or discharged with safety in the morning, previous to the occurrence of these winds.

Before concluding my remarks on the climate of the Cape, it is necessary to advert to the curious effects of refraction that are often observed. A strange distortion of objects is frequently seen, and even at a short distance from Robben's Island the surf sometimes appears to be thrown up into lofty jets of foam, or a wave is so distorted that it seems rolling in high enough to submerge the whole island. These distortions occur not only in the sea but in the land view. I noticed them during our visit to the observatory, and now call attention to them again, because the same effect seems to be produced on sea or on land by contrary causes. When at sea, refractions have been observed by us, whenever the thermometer at the masthead showed a higher degree of temperature than that at the surface of the water; but at the Cape the current of air in contact with the heated and sandy soil must be of a higher temperature than that immediately above it, and thus causes the distortion of distant objects; or the fact may be accounted for on the supposition of two parallel currents of different temperatures, moving in opposite directions, and beyond any immediate influence of the earth. I know of no place so favourable to the observation of this description of atmospheric phenomena as the Cape and its vicinity.

The population of the Cape colony, by the returns in 1841, was one hundred and fifty-three thousand, on an area of one hundred and nine thousand eight hundred and sixty-four square miles. The deaths amount annually to about one in forty. The coloured population exceeds the white by about ten thousand. A table containing the last statistical returns will be found in Appendix XV. Landed estates in the colony are generally held by those cultivating them, under a lease, and not in fee. The early settlers had not sufficient funds to enable them to purchase as large farms as were necessary, and the present system was in consequence resorted to. The leases, however, were made perpetual, and the farms held under this tenure are known in the colony as "Loan Farms;" they contain about three square miles, and there are many of this description still existing: these are considered as desirable tenures, being good as long as the rent is regularly paid, which is generally at the low rate of ten dollars for the tract. The lands, however, about the Cape, and in the Cape district, were obtained by grants, and are now known as "Gratuity Farms."

There are likewise freehold estates, which consist of a small farm, not much exceeding one hundred acres. These, I was told, were in the immediate vicinity of Cape Town. They were usually obtained by purchase of the first settlers.

The system of quit-rents is in perpetuity, and the rent is made to

depend upon the quality and circumstances of the crop. These are the largest kind of estates, and seldom include less than five to eight thousand acres.

The sale or transfer of land was also novel to us. No land can be sold, unless the persons make application at the Cape, to officers appointed, called commissioners, whose duty it is to see that all liens on the land, such as bonds and mortgages, are all paid up; and the liabilities are fully protected; and the person wishing to sell must have permission of the one who may hold any claim on the estate, before he can legally dispose of his property; and the consent of the mortgagee must be obtained in writing before the debt can be transferred with the property.

The day previous to our departure, I had the pleasure of again meeting Captain Belcher, who was now on his way home in the Sulphur. He had just arrived with his ship in Simon's Bay, where the English men-of-war anchor, as Her Majesty's dockyard is situated there: it is considered a safer harbour than Table Bay; but from what I heard of its conveniences, it seems ill adapted for a place to refit; and, indeed, I was told that this is seldom attempted. Our stay was not sufficiently long to enable any of us to visit it, and little inducement appeared to be held out to go there by those under whose guidance we had placed ourselves. Having transacted all our business, and finished our necessary observations, we prepared for departure. Before taking leave of the Cape, I must be permitted, in the name of myself and of the officers of the Expedition, again to tender our warmest thanks for the attention paid us by many gentlemen, who afforded us many facilities in the acquisition of information or the pursuit of pleasure. Among those to whom we were chiefly indebted for these kindnesses, were our consul, Isaac Chase, Esq., and Messrs. Thompson and Pillars.

Supplies of all kinds can be obtained at the Cape, and usually at reasonable prices; the bread we purchased, made from native flour, was of excellent quality; fruit also, though considered out of season by the inhabitants, could be purchased in any quantity, either in the markets or from the bumboats alongside of the vessels. The usual facilities for watering are rather deficient: there are no floating tanks, and some inconvenience results from the use of casks.

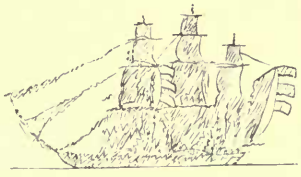
On the 17th, we got under way with a light and baffling wind. The air was from the eastward aloft, while a westerly breeze blowing below it, often took our lower sails aback; still the upper ones were full. By constant attention and frequent swinging of the yards, we effected a passage through the northern channel, passing at a short distance from

Robben's Island, on whose shore we saw, as usual, the breaking surf curiously refracted.

Robben's Island is now used as a place of confinement for criminals, who are employed in the quarries to furnish stone for paving and building. The stone is a schistus, and commonly known at the Cape as blue flag.

As we cleared the island, objects to seaward were seen refracted in a manner that I had never before observed so distinctly. As before stated, there was an upper and an under current in the atmosphere, and these strata were of different temperature. The thermometer at the masthead marking 73°, while that on the deck stood at no more than 59°. A ship about three miles distant in the offing, was seen vertically and horizontally refracted at the same time. Her courses and topsails appeared ill-defined, shapeless, and quivering; her bowsprit and head-spars formed curves, while her jib and flying-jib were drawn out in nearly horizontal lines. Above, her topgallant-sails and royals were seen perfectly well defined; a distinct line of bluish haze divided them from the lower sails, and could be traced to about sixty degrees on each side, until it joined with the horizon.

A signal made by this ship at the time, showed in faint colours, as if flying from her peak and fore-topsail-yard at the same time. The annexed wood-cut, from a sketch made at the time, will give a better idea of this appearance.



The angle subtended between the line of haze and the horizon, was twenty-five minutes.

The temperature of the water was often tried: it was found to stand at about the same temperature as when we entered on soundings, varying little from 64°. After running off about thirty miles from the coast, the temperature of the air rose to the same point.

On the 19th, Joseph Sylva (boy), died of phthisis. He had been long lingering, and was apparently affected with the disease when taken on board at Oahu, a few months previously.

We now shaped our course for St. Helena, which I was desirous of reaching at the earliest day, in order to intercept the two brigs, and if a further supply of bread could be obtained there, to proceed with them directly for the United States.

Our passage to St. Helena was of the ordinary length, thirteen days; we had very light winds and a smooth sea, indicating that a long calm had existed. Northerly currents generally prevailed, though at times

setting to the eastward and westward of that point. On the 30th of April, in the latitude of 23° S., and longitude 2° 40′ E., we entered the trades, from which time until our arrival at St. Helena on the 1st of May, we experienced no currents.

The appearance of the island disappointed us: its height and size were much less than we anticipated. It is but a bare and barren rock, rising abruptly from the sea; and the only thing remarkable is the succession of batteries, which are seen occupying every nook and corner where cannon could be placed, from the water-line to the highest peak. All now serve but to recall to mind the extraordinary man for whose safe-keeping so much cost and care had been bestowed. From the outward view of St. Helena, it seems scarcely necessary to have incurred so much expense and provided such means for the safe-keeping of Napoleon; for the island itself is almost inaccessible on all sides; its bare rocks rising several hundred feet perpendicularly from the water. To reach the roadstead it is necessary to pass within a short distance of the rocks, and close along them until the valley of Jamestown is reached, which offers the only anchorage. Here it is often difficult to procure a good berth, as the roadstead is frequently crowded with vessels.

On our arrival we were informed that the Porpoise and Oregon had sailed but a short time previously; all were well, and their stay at the island had been short. Six American ships were at anchor in the roadstead when we arrived, and three more came in the day after, making in all ten ships and a schooner bearing the flag of our own country.

In addition to these were two English and one Swedish vessel, and a Dutch sloop of war. Several captured slavers, all of which had been condemned, were seen, either partly broken up, or lying on shore preparatory to that process; and one, a Baltimore clipper, captured under Portuguese colours, was fitting as a British cruiser, to be employed against vessels in the same nefarious traffic.

Soon after anchoring, we were visited by our consul, Mr. Carrol, who offered us every assistance; he made arrangements for procuring us a supply of water, and a party for that purpose was permitted to remain on shore all night at the jetty. This is the only place at which either passengers or goods can be landed: it is furnished with suitable cranes and stairs; but even with these, it is not well adapted for the accommodation of visiters or trade. Precautions have been evidently taken to discourage a landing; a small guard is always kept on duty at the guardhouse and drawbridge. From the landing-place a narrow road leads along the face of the perpendicular cliff, towards the gate

of the fortress and town, at the mouth of the valley, which is here crossed by a strong and lofty wall, pierced with embrasures, on which guns are mounted. The only entrance into the garrison of Jamestown, from the water's side, is over a drawbridge, which crosses a wide moat, and through a large gateway.

We gladly accepted our consul's invitation to visit his family, and, after passing the gateway just mentioned, entered the town, which has every appearance of a well-kept garrison. It is of small extent, the mouth of the valley or rather gully in which it is built, not being more than five or six hundred yards wide, and narrowing quickly as it ascends. The houses are seldom more than two stories in height: that of the consul is situated near the forks of two narrow streets, from both of which are extended zigzag roads up the almost perpendicular sides of the gully. An inclined railway of several hundred feet in perpendicular height is built up the side of the western cliff, called Ladder Hill, on which provisions and water were hoisted, by soldiers who were under punishment, for the supply of a numerous garrison that formerly occupied the forts on its summit. This railway or ladder is a conspicuous object from the anchorage, and from it the cliff derives its name.

The interior of the island of St. Helena is uninteresting, and when compared with those we had recently visited, may be said to be devoid of beauty. It possesses nothing to recommend it to the notice of a stranger, except its connexion with Napoleon's exile. It is said this island was first suggested as a place of confinement for the great prisoner by the Duke of Wellington, who had himself been detained there for some months, while on his way from India, and was forcibly impressed with its natural strength and adaptation for his confinement.

To the circumstance of the residence of Napoleon this island owes not only its chief celebrity, but, as a consequence, its temporary growth and prosperity: and with the removal of his remains, St. Helena will revert to what it was formerly.

On his first landing, the ex-emperor occupied the very apartments formerly used by the Duke of Wellington; but was, the next day, at his own request, removed to the "Briars," a retired country cottage, situated in the small "bosom" at the head of the gully of Jamestown.

The only collection of houses is Jamestown; and, although situated in a narrow gorge, it is the best locality on the island for a town. The space occupied by it has been as much improved as was possible, and the place has rather a cheerful appearance; more, however, from the diversified character of its inhabitants, than from the neatness and architecture of its buildings. The variety of costume is greater than

one would expect, ranging from the well dressed English soldier to the Oriental costumes of India and China. There are many quadroons, who are said to be descendants of the natives of Madagascar, brought here originally by the Dutch. They were pointed out to me as remarkable for their beauty, and many of them have certainly, it must be acknowledged, well-developed and even handsome forms; which, from appearances, they are fond of exhibiting, and to which their style of dress is well adapted.

Extortion is here carried to its height, and although the stay of the stranger is only for a few hours, the time is sufficient to make him aware that he has submitted to some exorbitant demand, if his curiosity have led him to visit Longwood and the tomb of Napoleon.

Mr. Carrol was kind enough to make arrangements for our visiting Longwood and the tomb, and it was decided that we should set out at an early hour the next morning.

Captain Hudson, Mr. Waldron, and myself, accordingly landed at the jetty early the next day, and found waiting for us a small wagon with two stout horses, in which we seated ourselves, and were driven to the American consulate. We were there joined by Mr. Carrol, and taking the eastern road, commenced ascending the narrow track leading up the side of the cliff. The road seemed to have been carried over some places with great difficulty; heavy walls were built in some places to form the road, while in others the path was blasted out of the rock. As we ascended, we had a bird's-eye view of the town and the gorge in which it lies. The houses and their inhabitants were alike reduced in size, and we experienced the accuracy of the poetical assertion "that distance lends enchantment to the view," for from our elevated position all appeared neat and clean. The hospitals for the troops are situated in the upper end of the valley, in a space too contracted for comfort. Their appearance is strongly in contrast with that of those usually attached to British garrisons, and led to some inquiries on my part as to the necessity for their confined position. The island being usually healthy, and infectious diseases but seldom prevailing, quarantine is performed at Lemon Valley, or rather it was used for that purpose during our visit; a number of recaptured slaves, among whom the small-pox had made its appearance, being detained there.

The first object of interest that presents itself as connected with the residence of Napoleon, is the cottage at the Briars, to which he was removed soon after his arrival. It is situated in a small dell at the head of the gully, and has attached to it some ten acres of ground, laid out in walks and flower-beds. There are many similar spots on the

island, which are known by the name of "bosoms;" none of them, however, so striking, nor having such an air of quiet and comfort as that just mentioned. Its beauties are more strongly impressed by the marked contrast they afford to the arid and barren rocks of the gully side, up which we had been making our ascent under a burning sun. The only vegetation on the surrounding hills was a few Cacti and wild vines, and some firs that were imported from Scotland about fifty years ago. The high ground of the island was of equal altitude, there being but few points above the general level. On reaching it, we felt a sensible change of temperature, the air becoming raw and disagreeable. Turning to the eastward, we proceeded three miles along the road, and then turned into the path which leads to the quiet dell in which the tomb is situated. The road soon became so steep that we were obliged to alight from the carriage, and descend on foot to the cottage occupied by the widow Talbot, who furnishes refreshments to visiters, and who takes care to let it be known that it is customary to pay for them, whether you partake or not. Her continued whinings about her poverty, the injustice of the British government, and the unfulfilled promises of the Prince de Joinville, are singularly out of place, and at variance with the thoughts with which one's mind is occupied when visiting such a spot. In the rear of the cottage, at the end of the dell, and about thirty yards distant, is the tomb.

On the banks of the dell, a few yews, cedars, and weeping-willows, are growing; while in its centre stands the old and now leafless willow, which seems, like the Emperor, to have been killed by the treatment it has received. A spring of pure and delicious water bubbles from the rock near by; to it we retreated to avoid the annoyance occasioned by the monotonous whinings of an old sergeant. He talked continually of the length, breadth, and depth, of the vault, told us of how many slabs it was formed, how they were cemented together, how opened, and many other particulars of so little importance, that I shall not trouble my readers by repeating them. We at last put an end to the garrulity by paying him the expected shilling, and walking off out of hearing. This is an annoyance to which all who have visited the tomb have been subject, and which does away with half the satisfaction of the pilgrimage. We drank some water from the spring, received a bouquet of the Napoleon geranium from the little girls, and returned to the cottage, which we found crowded with Dutch officers, who were devouring the widow's eatables as if determined to have the worth of their money; from their great appetites she told us she anticipated but little profit. Scarcely had they finished eating, when their pipes were put in requisition, and a cloud of smoke not only filled the apartment,

but issued in all directions from its doors and windows. I have seldom seen so little regard paid to the comfort of others, or so little respect shown to the resting-place of the mighty dead, as by these officers.

After satisfying the claims of the widow, and disposing of certain relics obtained through her as marks of special favour, we departed for Longwood, about two miles further on. The road is good and nearly level, running along the top of a barren ridge; on our way we passed the "Tap-room," immediately opposite to which was the dwelling of the Count Bertrand. The horizon is visible from the road, both to the north and east; and on either side the eye wanders beneath into the deep and inaccessible gullies, from which their gloomy and uninviting character have obtained the appropriate name of the Devil's Gorge, &c.

LONGWOOD, ST HELENA

The day on which we paid this visit was called by the inhabitants a fine one, but we thought the air damp and chilly, and were glad to draw our cloaks closely around us. We soon reached the gate, and were stopped until we paid the usual fee of two shillings sterling for each person. The house is at present leased by the government to a Captain Mason, a retired army officer, for one hundred and fifty pounds per annum, and by his order the entrance fee is demanded before the gate is opened. Mr. Carrol pointed out to us the sites of the camps of observation, and other spots in the neighbourhood, interesting from associations connected with the residence of Napoleon. As we drove

towards the house, every thing wore a neglected look, to all appearance intentional.

The vignette gives a correct representation of Longwood, which is now but little better than a barn; the glass of the windows is broken, and the outward walls much disfigured. The door at which visiters are admitted is covered with a small latticed veranda, and leads into what is called the billiard-room, although it seems much too small ever to have been used for that purpose; its walls are covered with scribbling, and its general appearance is dirty and neglected. The next apartment is about fourteen by seventeen feet, said to have been used as a dining-room, and in which Napoleon died; it is now occupied by a patent thrashing and winnowing machine, and was strewed with chaff and straw. The adjoining room had been used as a library; its present state was disgusting, and it seemed as if appropriated to the hatching of chickens. The bath, bed, and dressing-rooms, which he occupied at the commencement of his illness, are now in part used as a stable. The place in which his body lay in state, contains eight stalls, five of which were occupied by horses and cattle.

If the design had been to desecrate as much as possible the habitation that had been occupied by the fallen Emperor, it could not have been more effectually accomplished; but whatever may be the motive, whether intentional or otherwise, it certainly redounds little to the credit of the British nation. The miserable condition of Longwood when we visited it was a subject of general animadversion. The money derived from the lease of the property is paid into the Queen's treasury, no part of this small sum being retained to keep the building in repair; nor are there any conditions in the lease that compel the lessee to do it. It is with regret I am compelled to state that the lessee is a military man, and an officer in the British army.

Longwood is bleak and exposed; the damp trade-winds sweep past it continually, and but few days in the year are without either mist or rain. The valley of Jamestown is known to be dry and healthy; there are some other spots also on the island that enjoy a climate as fine as any on the globe. One of these might have been chosen as a residence, which would have proved much more congenial to the taste, and better suited to the constitution of the Emperor. Plantation House, for instance, the country-seat of the governor, enjoys, by all accounts, a delightful climate.

The grounds of Longwood cannot be called pretty, but from the constant moisture the herbage is greener than in other parts of the island. There are no trees, but the shrubbery is dense around the gardens. The new house at Longwood is built of yellow sandstone,

one story in height, and is situated some hundred yards on the western declivity, and is in some measure sheltered from the easterly winds. It contains a handsome suite of rooms, and, when compared with the old house, seems quite a palace. At the time of our visit it was occupied by Lieutenant Smith, of the artillery, and his assistants, who have charge of the magnetic observatory. The house has never been finished: the death of the Emperor of course rendering its completion unnecessary. It is said that during his life he never visited it, nor would he allow any one to consult him about its plan, declaring that he would not remove to it.

Napoleon seems to have engrafted himself on the memory of the islanders; and all the events and little incidents occurring to him during his residence, are remembered and cherished by them with pleasure. His chief complaint regarded the system of espionage under which he was placed, from the hour in which he gave himself up to the English to that of his death. It has been asserted, and up to this time without contradiction, that Sir George Cockburn, who commanded the Bellerophon, in which vessel Bonaparte was transported to St. Helena, was ordered to make minutes of every conversation that took place during the voyage. These memoranda have been already published in Boston, and their authenticity, although denied, seems to be unquestionable; for the publication emanated from the private secretary of Sir George; who, while making out one fair copy of the minutes, made another for himself. Although the ministry may have thought themselves justified in taking this course at the time, yet it seems, at this time, scarcely reconcilable with a high sense of honour; and notwithstanding Sir George may have considered it necessary to obey implicitly his orders, still the fact that he lent himself to such a service must injure his reputation.

In justice to Sir Hudson Lowe, it must be stated, according to what I heard at the island, that his treatment of his royal captive was in strict conformity to his instructions, and that, as far as his orders were concerned, he was allowed no discretion. Many of the inhabitants know that he tried in several ways to ameliorate the condition of his prisoner, but he was not permitted to do so.

I trust that what I have said upon this subject will not be construed as disrespectful to a high-minded and friendly government, or be casting any odium on the many honourable and courteous British officers it has been my good fortune to meet in many parts of the globe, and who have extended to me and my officers the most grateful civilities; but I could not forbear the expression of my sentiments when I con-

template the prison-house of Napoleon, and the ignoble condition and uses to which it is put.

The officer in charge of the magnetic observatory complained that it was badly placed, and that both his instruments and observations suffered from the constant change of temperature, and the dampness of the situation. He politely showed us the instruments, which were in a detached building; after which we returned to Longwood, and soon after left it, glad to escape from the mist and driving wind that enveloped it.

From Longwood we took the road to Plantation House, which leads across the island, making numerous turns as it ascends and descends the gullies. Many pretty dells were occupied by neat cottages, in whose gardens were cultivated potatoes and other vegetables. Of the former, two crops are obtained within the year, and a ready sale is found for them to the vessels that visit the island. On our arrival at the porter's lodge of Plantation House, we were informed that the governor, Colonel Trelawny, had gone to Jamestown, and that the ladies of the family were not visible. We therefore, so far as time permitted, examined the grounds, which are laid out with taste, and contained a good collection of foreign trees. Some of these were very flourishing, and it was curious to see many trees of European species growing side by side with those of Australia.

Our botanists were of opinion that the tradition which prevails of the island, at the time of its discovery, having been covered with wood, is erroneous; and that the story of the destruction of this forest by goats, is equally so. The barrenness of this island is well illustrated by the difficulty with which young trees are preserved from the ravages of sheep or goats. Pasture is so scarce, that but few cattle are kept, and these are chiefly importations from the Cape of Good Hope. Their scarcity may be judged of from the price of beef, which sells for twenty-five cents a pound; and it may be as well to state, that to strangers the prices of all other eatables are equally exorbitant.

From the road near Plantation House, we had a good view of the gully in which Jamestown is situated, together with the ravines extending into it from the interior of the island. Descending, we passed over a portion of the island, which is little better than a barren rock. Yet in some places comfortable-looking houses were seen, and here and there a beer-house, or tap-room, quite in the English style, and, from all accounts, as great nuisances as low taverns are in any country. We finally reached the fortification on Ladder Hill, and made the descent of the zigzag road on the side of the cliff, passing a place

called Colonel Pearce's Revenge, where the road is completely overhung by large masses of rock, which seem ready to fall. The rapid pace of the horses, the frequent sharp turns, and the overhanging cliff, excite some alarm in those not accustomed to them; and I must confess that I was quite satisfied when we passed the last turn, and were safely landed at the consulate.

On our return to Jamestown, the consul and myself called to pay our respects to Colonel Trelawny, whom we found at his office; he is a tall well-formed man, with a pleasant expression of countenance, and a frank soldierlike air. He is much respected by the inhabitants, has made himself acquainted with their wants, and is doing his best to satisfy them. They call him the "good man," in contradistinction to his predecessor. He received us with great kindness, and asked me to visit and spend some days at Plantation House.

Several hundreds of recaptured slaves are at present inhabiting the gullies to the eastward and westward of Jamestown. The most convenient way of visiting them is by sea; some of our officers expressed a desire to do so, but the inhabitants seemed much shocked at the mere mention of such a wish. The males and females are separated, and both sexes are supplied with rations by government.

The population of the island is about four thousand. It consists of whites, who, if the garrison be deducted from their numbers, form the smallest portion of the inhabitants; of negroes and their descendants of the mixed blood, and some few Chinese. The negroes were brought by the East India Company from Madagascar, and, with their descendants, now form the largest portion of the population. The first class include all engaged in trade, auctioneers, tavern-keepers, and mechanics.

The number of Yankee "notions" displayed in all the shops, indicated that the island derives its chief supply of useful articles from the United States.

St. Helena is a free port: the imports consist of supplies for the inhabitants, and necessary articles for the shipping that visit it; the latter can only be obtained at an advanced price.

The number of vessels that touch annually at the island is now about eight hundred, having much increased since the opening of the East India trade.

The usual rates of exchange, with the value of coins current, fixed by proclamation, will be found in Appendix XVI.

We embarked in the afternoon, regretting that our time was so limited, and that no opportunity was afforded us to return the kind attentions bestowed upon us by the consul and his family.

As we were getting under way, it became evident that many of the seamen had obtained supplies of grog from the shore, in spite of all the precautionary measures that had been taken. One, in consequence, fell from the main-top, but, fortunately for him, while falling, struck a portion of the rigging, and was thus canted into the sea, from which he was picked up uninjured. When the anchor was up we bore away to the northward, under all sail, with a favourable breeze.

As we passed through the tropics, many opportunities were afforded us for viewing the zodiacal light, both in the morning and the evening. Its general appearance was that of a well-defined cone, whose height, as marked by the stars, remained nearly constant at 40° elevation, and at the base 15°. Its first appearance after sunset was like a broad semicircular band of light, the brightness of which increased as the evening closed in, when its shape became that of a well-defined cone. The light was sometimes equally diffused, and at others appeared as if radiating through the cone. Its intensity varied from a light equal to that given by a bright aurora to that of a comet, the centre of the cone being often the least brilliant; and during a partially cloudy evening it was sometimes so bright as to obscure stars of the second magnitude. Its appearance in the morning was better defined than in the evening, and the light was more of a blue than a yellow tint; the altitude of the cone was greater, and its base of less extent. As we changed our latitude, the position of the apex of the cone remained stationary, but its inclination varied. For further information on these phenomena, I must refer the reader to the volume on Physics.

On the 9th of May, we crossed the magnetic equator in latitude 9° 20′ S., and in longitude 16° 40′ W.

I had been led to expect in approaching the equator that we should encounter strong currents setting to the north and westward, but our observations showed that the current was slight and flowing to the south and westward. On the 10th of May we were set forty-five miles N. 85° W.; the difference of temperature between the surface water and that at one hundred fathoms depth, was fifteen degrees. On the 11th we experienced no current, neither had we any on the 12th or 13th. On the 14th, the current set us S. 72° W., thirty-two miles; and on reading the deep-sea thermometer, I thought that some mistake must have been made, as it had fallen since the last observation eight degrees. A second trial was therefore made; but the result was the same, making the difference between the surface temperature and that at one hundred fathoms, nearly twenty-four degrees.

The northeast trades were entered on the 15th of May; the difference of temperature being similar, and the current setting us to the southwest and west thirty-four miles. On the 16th we crossed the equator, in longitude 30° 30′ W. At 6 A. M., the same day, the thermometer at one hundred fathoms depth rose to 68·5°, being the same temperature as that experienced before the 14th, when we encountered the cold submarine current. We had crossed this current in a direction nearly at right angles to its flow, and I estimated its width at two hundred miles. The current on the 19th still set to the southward; the difference between the deep-sea and the surface temperature being found to be again twenty-four degrees. This was also the case on the 20th, on which day I tried the temperature at fifty fathoms depth, and there found it only five degrees lower than at the surface. This second submarine stream was found to be about eighty miles in width: we crossed it steering a northwest-by-north course. It may be that these submarine streams flow here to the south, and produce the southerly current we experienced. It was quite evident, from the numerous long lines of rips that we passed, that opposing currents existed of great force, which did not find their way to the surface. These rips extended in a north-northwest and south-southeast direction.

During the next five days, we pursued our homeward course rapidly, experiencing but little current. On the 26th, we reached the latitude of 16° N., and longitude 48° 31′ W. The temperature at one hundred fathoms depth differed only three degrees from that at the surface, and continued to vary between that and seven degrees, until we struck soundings.

On the 28th, we encountered quantities of the Fucus natans, or gulf-weed, which was of a dark brown colour, and evidently undergoing decomposition. The peculiarity of this weed arranging itself into long strips in the direction of the wind, was distinctly seen. Some of these were more than a mile in length, while at other times we passed through fields of several acres in extent. During this and the previous day, as well as the two following days, the current was found to set to the southward, at the rate of about eighteen miles in twenty-four hours.

On the 2d of June, we had reached latitude 29° N., and longitude 68° W.; and the wind, which had been gradually hauling from the northward and eastward round to the south-southwest, began to fail us. We had light and variable breezes from this day until the 8th, when we reached the neighbourhood of the Gulf Stream, and experienced the weather that is peculiar to it. The lightning was very vivid, and the rain fell in torrents; its temperature was 63°. In the latter part of the

day it blew a strong gale from the eastward. I regretted this much, as it was my intention to make full experiments on the deep temperature and the velocity of the current in the Stream; but the roughness of the sea and violence of the wind prevented it. The close proximity to our port also, and the increasing impatience of all on board to reach their homes, forbade all unnecessary delay. The experiments we did make gave a difference of three degrees of temperature, between the surface and one hundred fathoms depth. The highest temperature of the surface experienced while crossing the Stream was 79°; when we entered, it was 77°. We were seven hours in crossing it, and found, as in our first passage, that the inner edge was the warmest. During the next half hour after leaving the Gulf Stream, the surface temperature fell twelve degrees, and so continued until we got on soundings, when it rose again some three or four degrees. The morning of the 9th was foggy, which rather tried our patience, but by firing guns we attracted the attention of the pilot-boats, and on the fog clearing away a little, discovered one close to us. A pilot now boarded and took charge of the ship, and at noon on the 10th of June, 1842, anchored us off Sandy Hook, where a steamer came alongside soon afterwards, and took us in tow. After stopping half an hour at the quarantine ground, to receive the visit of the health officer, we held our course towards the city of New York.

Before I left the Vincennes off the Battery, the crew were called to muster, when I expressed to them my thanks for the manner in which they had conducted themselves during the cruise, and stated the confident belief entertained by me, that they would receive from the government such rewards as the successful performance of the cruise, and their long and perilous services, entitled them to. A national salute was then fired, and my pennant hauled down; the command of the ship being given to Captain Hudson, who proceeded with her to the navy-yard. As soon as she was safely moored, all the men who could be spared were allowed to go on shore, with their bags and hammocks. A happier set of fellows than they were is not often to be met with; being relieved from their long confinement on shipboard, and the severe discipline of a man-of-war.

Those who have perused this full narrative of the events of the Expedition, I confidently believe, will absolve me from all the charges so industriously circulated against me, relative to the manner in which I had conducted the Expedition; at the same time they will see what meed of honour or reward is justly due to the officers and crews who faithfully served out the cruise. All of the former, and many of the

latter, are still to be found on the rolls of the navy, and to them, I trust that the applause of a grateful country has been only delayed, not wholly lost.

On our arrival home, the health of the prisoner Vendovi had so far declined, that it was necessary to place him in the Naval Hospital at New York. Every attention was paid him there, but very soon afterward he expired.

The Porpoise and Oregon had, in the mean time, proceeded to Rio Janeiro, where they executed their instructions, and having obtained the necessary supplies, sailed for the United States. After leaving the equator, their route differed but little from that pursued by the Vincennes.

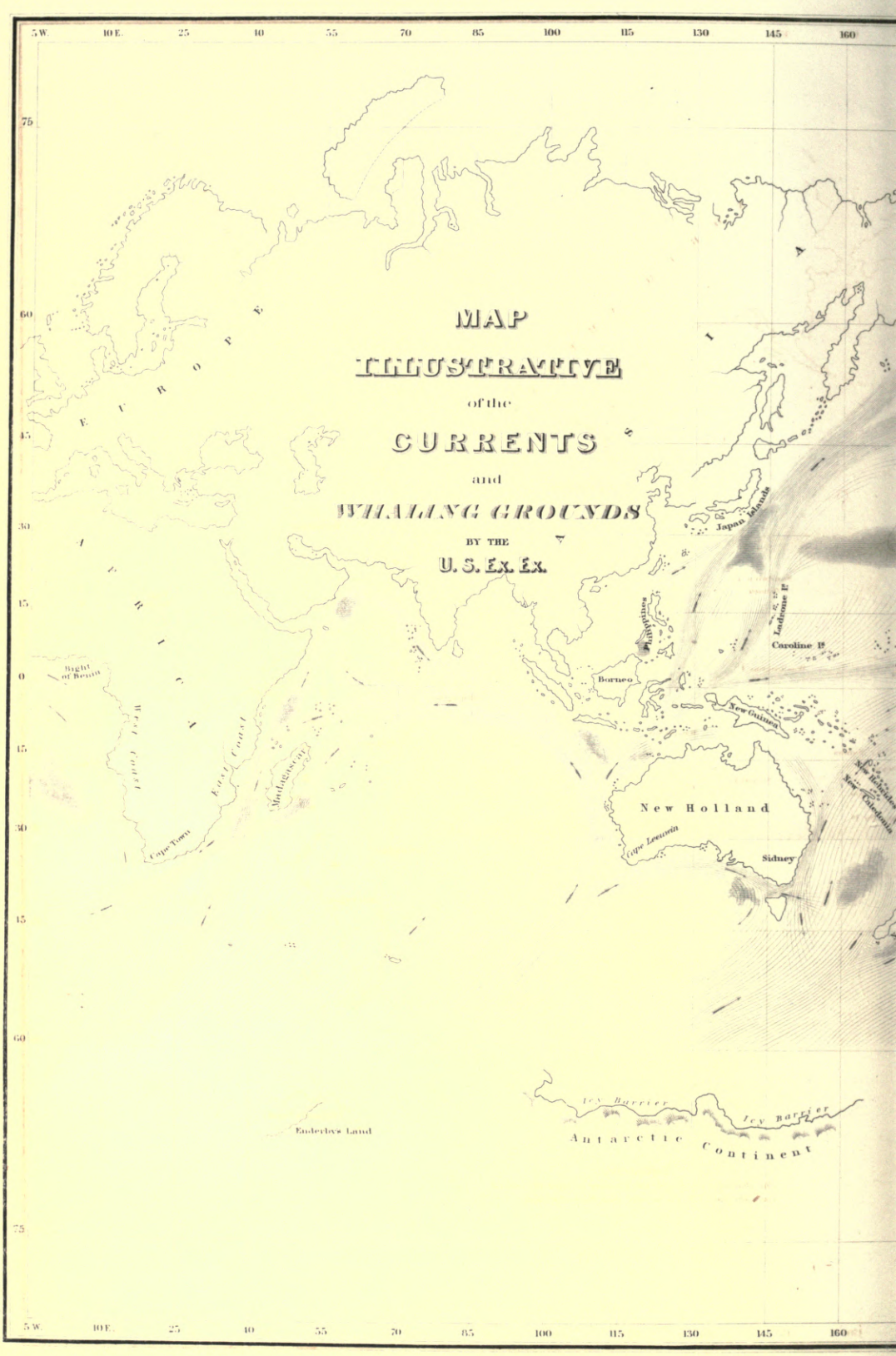
In their deep-sea soundings they found the same low temperatures that we had noticed; and in crossing the Gulf Stream, the difference of temperature between the surface and at one hundred fathoms was but five degrees. Both vessels arrived at New York within a few days of each other, and their crews were discharged in the same manner as that of the Vincennes.

CAPE OF GOOD HOPE.

CHAPTER XII.

CONTENTS.

CONNEXION OF THE SUBJECTS — OPPORTUNITIES AND MEANS OF OBSERVING CURRENTS — DISTINCTION BETWEEN STREAMS AND CURRENTS — CURRENTS OF THE NORTH ATLANTIC — LABRADOR STREAM — GULF STREAM—RENNELL CURRENT—SUBMARINE POLAR STREAMS—GUINEA STREAM — EQUATORIAL STREAM — RECAPITULATION — SARGASSO SEA — STREAMS OF THE SOUTH ATLANTIC — BRAZIL STREAM — PATAGONIAN STREAM—SOUTH AFRICAN STREAM—PHENOMENA OF THE NEIGHBOURHOOD OF ST. HELENA — POLAR STREAM OFF CAPE HORN — ITS LOW SUBMARINE TEMPERATURE—CHILI STREAM — PHENOMENA AT THE GALLIPAGOS ISLANDS—INDICATION OF SUBMARINE POLAR STREAMS—PHENOMENA AT THE SOCIETY ISLANDS—AT THE SAMOAN GROUP—AT THE FEEJEE GROUP—AUSTRALIAN STREAM—SOUTHERN POLAR STREAM — NEW ZEALAND CURRENTS — CURRENTS BETWEEN TONGA AND FEEJEE—SUDDEN RUSH OF WATERS ON THE POLYNESIAN ISLANDS—SPACE OF VERY ELEVATED TEMPERATURE — PACIFIC EQUATORIAL STREAMS — PHENOMENA OF THE SANDWICH ISLANDS—STREAMS OF THE NORTHWEST COAST—JAPAN STREAM — CURRENTS OF THE CHINA SEAS — OF THE EAST COAST OF AFRICA — EQUATORIAL STREAM OF THE INDIAN OCEAN — CURRENTS OF THE MALABAR COAST, CHAGOS, AND COMORRO ISLANDS—STREAMS OF THE MOZAMBIQUE CHANNEL — EQUATORIAL STREAM OF THE SOUTH ATLANTIC — GENERAL VIEW OF THE FACTS — ZONES OF CALMS AND STILL WATERS—SUGGESTIONS IN RELATION TO THE THEORY OF CURRENTS — CONNEXION OF THE OCEAN STREAMS WITH THE MIGRATIONS OF THE SPERM WHALE—IMPORTANCE AND EXTENT OF THE WHALING INTEREST—CRUISING-GROUNDS OF SPERM WHALERS—IN THE PACIFIC—IN THE ATLANTIC—IN THE INDIAN OCEAN—DIRECTIONS FOR WHALING IN THE PACIFIC—RELATIVE TO THE DECREASE OF WHALES — RIGHT WHALE FISHERY—DEPRAVED CHARACTER OF THE NEW ZEALAND AND AUSTRALIAN WHALERS—CASE OF THE AMERICAN WHALE-SHIP ADELINE — RIGHT WHALE FISHERY IN HIGH LATITUDES — EXCITEMENT OF THE FISHERY — SLAUGHTER AND TREATMENT OF THE PRODUCTS — PROFITS OF THE BUSINESS — FREQUENCY OF DISPUTES BETWEEN THE MASTERS AND CREWS — REMEDIES SUGGESTED—PROPOSAL FOR THE IMPROVEMENT OF THE MORALS AND CONDITION OF THE CREWS.


MAP
ILLUSTRATIVE
of the
CURRENTS
and
WHALING GROUNDS
BY THE
U. S. Ex. Ex.
EUROPE
ASIA
AFRICA
Japan Islands
Ladrone Is
Caroline Is
Philippines
Borneo
New Guinea
New Holland
Cape Leeuwin
Sidney
New Hebrides
New Caledonia
Bight of Benin
West Coast
East Coast
Madagascar
Cape Town
Enderby's Land
Icy Barrier
Icy Barrier
Antarctic Continent
5 W.
10 E.
25
40
55
70
85
100
115
130
145
160
75
60
45
30
15
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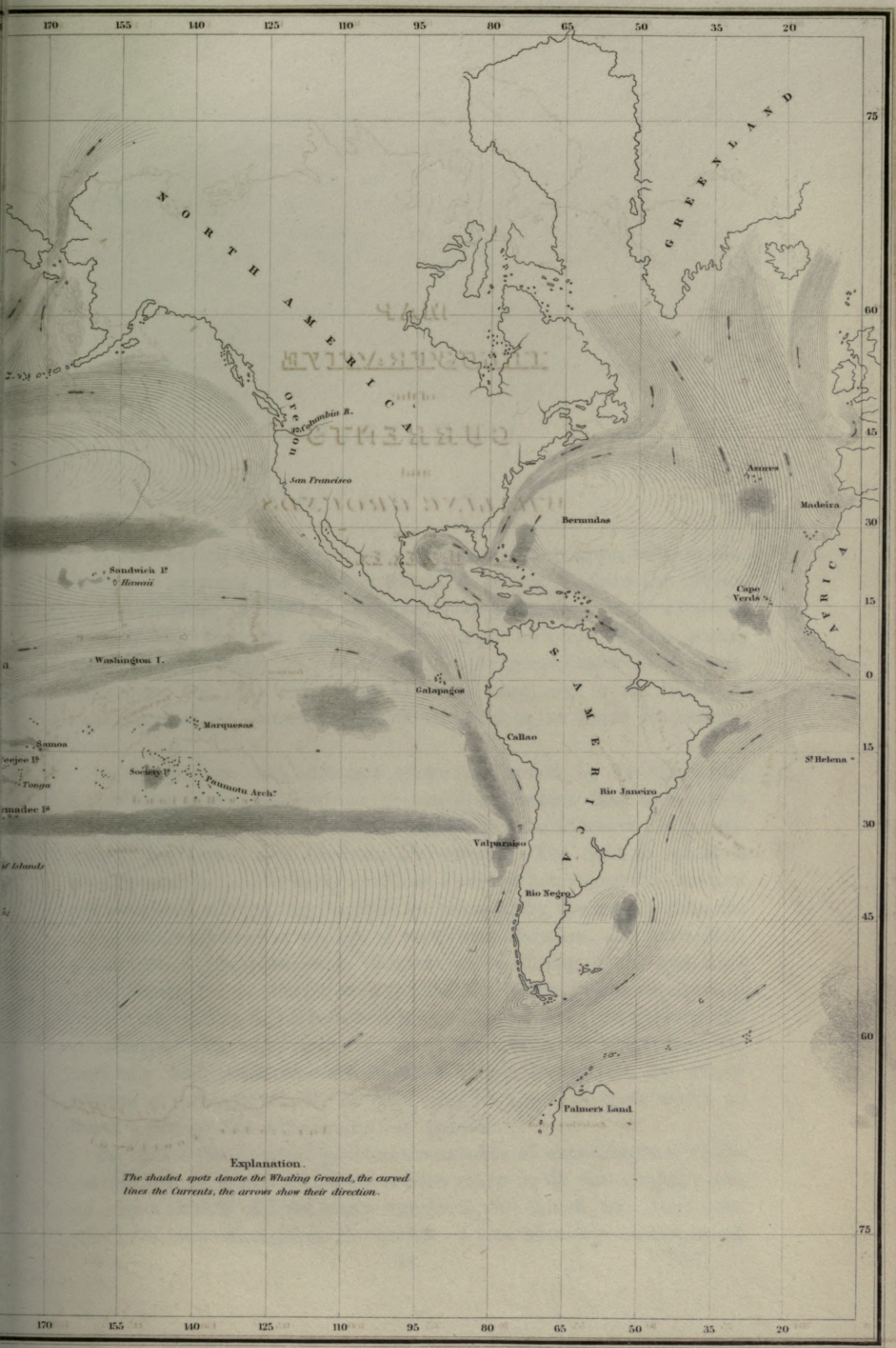
15
30
45
60
75


170
155
140
125
110
95
80
65
50
35
20
75
60
45
30
15
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15
30
45
60
75
NORTH AMERICA
GREENLAND
AFRICA
SOUTH AMERICA
Oregon
Columbia R.
San Francisco
Bermudas
Azores
Madeira
Cape Verds
Sandwich Is
Hawaii
Washington I.
Galapagos
Marquesas
Samoa
Tonga
Society Is
Paumotu Arch.
Callao
Valparaiso
Rio Janeiro
Rio Negro
St Helena
Palmer's Land
Explanation.
The shaded spots denote the Whaling Ground, the curved lines the Currents, the arrows show their direction.

CHAPTER XII.

CURRENTS AND WHALING.

It may at first sight appear singular that subjects apparently so dissimilar as currents and whaling should be united to form the subject of one chapter. Before its conclusion, however, we trust to establish satisfactorily that the course of the great currents of the ocean, sweeping with them the proper food of the great cetaceous animals, determines not only the places to which they are in the habit of resorting, but the seasons at which they are to be found frequenting them.

In the devious and extensive cruise performed by the Exploring Expedition, many, and perhaps greater opportunities than had before been enjoyed by any one vessel or squadron were afforded for investigating the course and direction of currents. The field of research thus opened proved to be so vast that I cannot but regret that we had not possessed still greater facilities for prosecuting the inquiry than we could attain even in a voyage of such long duration. In particular, simultaneous observations in different parts of the ocean, and their continuance for months or even for the whole year, were requisite to render the results, that I believe I have attained, more satisfactory and conclusive. Enough, however, has I hope been done to excite the curiosity and rouse the attention of future navigators, by whose labours a sufficient number of facts may be collected upon which to found a theory that will admit of no question.

To obtain the greatest practicable number of experiments with the current log, of which mention has been made in the first chapter, was an object which claimed early attention, and which was kept constantly in view throughout the cruise. I was however aware, as all

those who have used this instrument extensively must be, that it is liable to many objections, and that in particular if the current be beneath the surface, or, for want of a better term, may be denominated *submarine*, no result can be obtained by its use. If not perfect, however, the current log was at least a useful indicator; and its regular use, which was ordered to take place whenever the state of the sea would permit, served to keep the subject of currents continually before us. It is unnecessary to recount the number of the experiments that were performed; suffice it to say, that they were made both by day and by night, and were persevered in until the record of them became an almost daily portion of our journals; and the interest in them was extended from the officers, until they became a subject of inquiry even among the crews.

Upon the chart that exhibits the tracks of the squadron when united, and of the vessels when separate, the direction and force of the upper currents is indicated. The results thus expressed were obtained by a comparison of the position assigned to the vessels by the dead reckoning, and the true place shown by astronomic observations. This method, when practised by good observers, and particularly when furnished with chronometers of such excellence as can now be obtained, is in my opinion that which is liable to the fewest objections. Still it is to be desired that the allowances in the dead reckoning for lee-way, the heave of the sea, steerage, &c., should be founded on principles so certain as to admit them to be applied separately, and that less was left to the mere judgment of the navigator. The use of steam in navigation, and the introduction of improvements in the log, will probably bring about this desirable result.

In order to attain greater certainty, every calculation on which the rate and direction of a current was founded, has been made anew since the return of the Expedition; and it is trusted that the chart now exhibits a full and correct representation of the action which influenced the position of the vessels, freed in a great measure from the causes of uncertainty of which I have spoken above.

On the same chart are represented the courses of the winds, and the isothermal lines for every five degrees of the thermometer, from 30° to 95°. The zones lying between these lines are coloured in tints varying from cold to warm, in order that at a single glance the curves may be conspicuous. By simple inspection it will be seen how close is the connexion between the position of these lines and the figure of the zones they enclose, with the flow of the streams of which I am about to treat. It will at least be obvious that the distribution of the temperature at the surface of the ocean is affected by causes very

different from those which are usually considered to be the only ones in action.

In order to obtain precision of language, I have chosen to distinguish between *streams* and *currents*, employing the former term to express the movements of water by which the circulation of the great mass of the ocean is maintained, and confining the latter to those less extensive in their influence, or local in their effects; and the direction from whence the great streams are derived as *polar* and *equatorial*.

I shall now proceed to speak of the streams which we met with on our voyage, citing, whenever it is necessary, such facts derived either from general experience, or the authority of individual observers, as may be useful to extend the inferences, or verify our own observations.

Immediately after our departure from the capes of Virginia, we felt the influence of a stream setting to the southward, and parallel to the coast. The existence of this was apparent from our first observation of latitude. It may, however, often escape notice, as the navigator is apt to ascribe the effect of this stream rather to an error in taking his departure, than to a set of current. In order that the fact may be clearly perceived, it is necessary that the distance of the vessel from the lighthouse, or other object on shore with which the dead reckoning begins, should be determined by precise observations, instead of being merely estimated, as is the usual mode. Notwithstanding the inaccuracy growing out of this cause, it has been long known to seamen that a counter-current is setting close to the inner edge of the Gulf Stream, and has been distinguished by them as its eddy. That it cannot be of the nature of an eddy of that heated body of water, is evident from the great difference of temperature, which falls suddenly fifteen or twenty degrees, in passing from the Gulf Stream into that which flows in an opposite direction. The latter is also five to ten, and even fifteen degrees colder, according to the season, than the waters of our bays or rivers.

The inner stream flowing to the southwest is now well known to exist along our whole eastern coast and that of Nova Scotia, and the masters of our packet-ships have by experience discovered the value of which it may be to them in their homeward passage. This they do by keeping to the north of the forty-second parallel until off Cape Sable.

Tracing this stream in a direction opposite to its course to the most distant part of Nova Scotia, it is found to be a part of one that flows southwards along the shore of Labrador, and which is well known by the name of that country. The Labrador Stream therefore flows along the coast of the New Continent, from Davis's Straits as far to the south

at least as Cape Hatteras. It is consequently of that character which is generally known as *polar*.

One of the strongest facts in support of the extension of this stream to the farthest northern point we have named, lies in the transportation southward of vast masses of ice along the coast of Labrador, which are met annually in May, June, and July, off the banks of Newfoundland. This is a cause which affects in a most remarkable manner the climates of Newfoundland and Nova Scotia, and causes the harbours even of the latter country to remain ice-bound to a late period in the year. Nor is its influence believed to be of small amount in the climate of our Eastern, or that of the sea-coast of our Northern States.

The phenomena of the icebergs develope another fact in relation to this current, namely, that where the influence of the current ceases to be felt upon the surface, the body of its waters still continues its course southwards beneath the flow of the Gulf Stream, which floats upon it precisely as the fresh water of the large rivers of the New World are to be seen for leagues from the shore flowing on the salt and denser water beneath. The phenomenon to which we have reference is, that icebergs near the Grand Banks have frequently been observed moving rapidly to the southward and westward, in places where ships experience a current to the northward and eastward. The icebergs, floating by the laws of specific gravity, with no more than one-tenth of their mass above the surface, evidently are carried onward by a stream flowing in the former direction, against whose force the action of the superficial current on a part of their surface is of no avail, while ships are wholly immersed in the latter, and obey its influence.

Here then we have an instance of two currents flowing one above the other, in directions almost opposite to each other.

The Labrador Stream, besides being overspread by the waters of the Gulf, the surface part of it is doubtless deflected from its flow to the southward, and forced along the eastern coast till it is obstructed very materially in the vicinity of George's Bank.

The position and supposed dangers of these banks, and the narrowness of the Labrador Stream in passing them, has prevented navigators from taking the full advantage they might have derived from their knowledge of its existence. Of the loss of time frequently growing out of this difficulty, I had myself an instance in a voyage from Europe in the winter of 1836–37. Captain Hebberd, who commanded the vessel in which I was passenger, feared that he might approach too near to the shoals of George's Bank and Nantucket, and therefore, when opposed by a westerly wind, made tacks that carried him within

the influence of the Gulf Stream. Since that time, in the summer of 1837, I was employed in the survey of the shoal on George's Bank, and after having explored every part of it, am satisfied that the alleged dangers do not exist to the extent believed. During the continuance of that survey, I spoke and made inquiries of many masters of coasters, all of whom confirmed the fact of the existence of a stream of cold water between the Gulf Stream and soundings. In this cold and favouring stream, vessels homeward-bound may be kept without difficulty or danger, by a due attention to the indications of the thermometer and lead-line: the former showing when the adverse stream of the Gulf is entered, the latter, when the variable currents of the shore are met with, or the dangers approached. In the navigation of this part of the ocean, great attention ought to be paid to keep within this stream, by all those who desire to effect a speedy passage from Europe.

Circumstances afforded me a very favourable opportunity for observations upon the Gulf Stream. We met in it with light winds, which rendered our progress so slow, that we were forty-eight hours in crossing it, during thirty-nine of which we were sailing at right angles to its direction, a course the most favourable for the purpose. The remaining nine hours we were heading the stream. The fact of our having entered the stream was immediately detected by the thermometer, indicating a sudden rise of the temperature of the water; and the lightness of the wind enabled us to repeat the observations frequently. These observations are recorded in the following register.

Aug. 20.	TEMP. OF WATER.	Aug. 21.	TEMP. OF WATER.
7 A. M.	77°	1 A. M.	80°
8 "	79	2 "	80
9 "	81	3 "	80
10 "	81	4 "	79
11 "	81·5	5 "	80
12 M.	82·3	6 "	80
Aug. 21.		7 "	81
1 P. M.	83	8 "	82
2 "	83	9 "	81
3 "	83	10 "	81
4 "	83	11 "	82
5 "	83	12 M.	82
6 "	83	Aug. 22.	
7 "	83	1 P. M.	82
8 "	82	2 "	82
9 "	81	3 "	80
10 "	82	4 "	80
11 "	81	5 "	80
12 "	80	6 "	80

Aug. 22.	TEMP. OF WATER.	Aug. 23.	TEMP. OF WATER.
7 P. M.	79°	1 P. M.	79°
8 "	80	2 P. M.	81
9 "	81	3 "	81
10 "	80	4 "	80
11 "	79	5 "	80
12 "	79	6 "	80
1 A. M.	79	7 "	80
2 "	79	8 "	80
3 "	79	9 "	79
4 "	79	10 "	79
5 "	79	11 "	78
6 "	79	12 "	78
7 "	79	1 A. M.	78
8 "	79	2 "	80
9 "	79	3 "	79
10 "	79	4 "	79
11 "	79	5 "	78
12 M.	79	6 "	77
		7 "	77

It will thus be seen that the Gulf Stream is somewhat warmer towards its inner edge than it is on the outer.

The calculations of the run of the ship gave fifty-three miles for the breadth of the Stream at the place where we crossed it, namely, on the parallel of 34° 30′, and for its velocity about two miles per hour. All navigators, however, are aware of the fact, that both the breadth and velocity of the Gulf Stream vary much, and that it occasionally approaches much nearer to the coast than it does at other times.

The approach of the Gulf Stream to our shores, has been ascribed to the influence of northeasterly winds. These are known to affect the tides in our bays and harbours, but I am unwilling to admit that these are an adequate cause for the change in position and velocity of so great a body of water. The action is far too trivial to account for such an effect. It is certain, on the other hand, that the Gulf and Labrador Streams both owe their existence to the unequal distribution of temperature on the earth's surface; there must be a difference in the intensity of the causes that act to produce these effects at different seasons of the year, and it may be inferred that the changes of the seasons act unequally upon the two streams. The force of the portion of the Labrador Current, which follows the coast of the United States, will, when superior, carry the Gulf Stream outwards, and when that force diminishes, the Gulf Stream will approach more nearly to the coast, and most nearly when its own relative force is the greatest. Whatever be the ultimate causes of the streams, it would appear that

their approximate causes are influenced by temperature—the Gulf Stream being increased in mass and velocity when the temperature is highest, and the Labrador Stream when it is lowest; and in conformity, we find it a general impression that the former is broader and more rapid in the summer of our climate than in winter. I must however state, that I have been unable from my own personal observation, either by the thermometer or the set of the vessel, to distinguish this increase of the Gulf Stream in summer. Thus in my passage to England, in August, 1836, from the time we passed to the eastward of George's Bank, in a latitude about a degree to the south of it, we experienced a low temperature in the water, and the vessel was retarded. We were therefore in the Labrador Current.

After the squadron had crossed the Gulf Stream, we experienced little action from current until we reached Madeira, the whole difference between our dead reckoning and the true place of the ship being no more than one hundred and seventy-five miles in twenty-six days.

Before leaving this part of our subject, it may be as well to refer to facts familiarly known, but which did not come within the scope of our observations. The stream known on our coast by the epithet of Gulf, may often be traced upon the surface, but with diminished velocity, entirely across the Atlantic, throwing at some seasons the seeds and drift of tropical climates upon the British Islands, even as far north as the Shetlands. At other times, when the Gulf Stream ceases to flow, or is overpowered by the great Polar Current, they are carried by the latter to the southeastward, on the coast of Spain and Portugal, which current has been so disastrous by the number of vessels that have been wrecked on Cape Finisterre; where it divides, one branch of it passing around the shores of the Bay of Biscay, along the west coast of France, and thence crossing the English Channel, which is now well known as the Rennell Current; while the main Polar Stream flows southward, along the coast of Portugal towards Madeira, with a diminished velocity, as a surface current.

That the stream which sets upon Cape Finisterre is the origin of the Rennell Current, the following remarks by Horsburgh clearly show.

"The current is found to set eastward, from March to November, particularly when westerly winds prevail; and off Cape Finisterre, and near the south part of the Bay of Biscay, it sets mostly along the coast to the eastward; and along the east coast of the bay, it sets to the northward, parallel to the west coast of France."

At Madeira and the Canary Islands the surface Polar Stream appears to have ceased; but by our observations on the deep-sea tempe-

rature, a submarine stream still appears to exist. In lieu of the former we have the current familiarly known as the African Current, by its causing so many distressing wrecks on that coast, and to which attention has often been drawn by the captivity and cruel slavery to which their crews have been subjected.

As has been seen in the Narrative, but little surface current was found on our voyage from Madeira to the Cape de Verdes; but the submarine stream was still found, as was shown by the low temperatures of the deep-sea soundings. At, and in the neighbourhood of the latter islands, and between them and Cape Verde on the African coast, a strong surface current is felt. In endeavouring to account for this remarkable circumstance of the creation of a current, and its increased velocity, of which every navigator must be aware when in the neighbourhood of many islands, and the effects of which we have often experienced in our long voyage, I shall now advert to the cause which I think is quite sufficient to produce the effect; and that is the accumulation of water caused by the obstructions that islands offer to the onward flow of submarine streams; thus raising the level of the ocean in their vicinity, and consequently a tendency to run off, and thereby cause a current where none was perceptible before, or an increased velocity in that which was felt.

To this cause, then, I believe the currents around the Cape de Verde Islands owe their origin, as well as all others prevailing near islands and banks; and as corroborative proof of this I will mention the fact that where no submarine polar stream exists, permanent currents are not found. This will, I trust, be amply shown in the sequel.

That remarkable current along the coast of Guinea, from which it derives its name, passing Cape Palmas, and flowing into the Bight of Benin, I attribute to the same cause. This current is in the immediate vicinity of the Equatorial Stream, but runs in an opposite direction, and for a long distance parallel to it. Of this current the following remarks were made by Colonel Sabine, when he passed it in H. B. M. ship Pheasant, Captain Clavering, in 1822.

"In the voyage between Cape Mount and Cape Three Points, in April and May, 1822, the Pheasant's progress appears to have been accelerated one hundred and eighty miles by the current called the Guinea Current, which, in the season when the southwest winds prevail on this part of the coast, runs with considerable velocity, in the direction of the land, from Cape Palmas to the eastern part of the Gulf of Guinea. The breadth of this current, abreast of Cape Palmas, varies with the season, and has been found as much as one hundred and eighty miles; but, in its subsequent course to the eastward, it

enlarges to nearly three hundred, and occupies the whole space between the land on one side, and the Equatorial Current, running in an opposite direction, on the other. The velocity abreast of Cape Palmas and Cape Three Points, and in the vicinity of the land, was, in the month of May, about two miles in the hour; and farther to the eastward, where the Pheasant crossed its breadth, from Cape Formosa to St. Thomas's, and where its velocity had been much diminished by the dissipation of its waters, it was found to preserve a general rate of rather less than a mile an hour, and a direction a few degrees to the southward of east.

"The general temperature of the stream in the mid-channel, in the Gulf of Guinea, in April and May, exceeds 84°, diminishing from 82° and 83° on its southern border, where it is in contact with the colder water of the Equatorial Current; and occasionally to between 79° and 81½° on its northern side, in the proximity of land.

"In the passage between the river Gaboon and Ascension, being a distance of one thousand four hundred miles, the Pheasant was aided by the current above three hundred miles in the direction of her course.

"But the more important distinction, both in amount and in utility in navigation, is between the waters of the Equatorial and Guinea Currents. These exhibit the remarkable phenomenon of parallel streams, in contact with each other, flowing with great velocity in opposite directions, and having a difference of temperature amounting to ten or twelve degrees. Their course continues to run parallel to each other, and to the land, for above one thousand miles; and, according as a vessel, required to proceed along the coast in either direction, is placed in the one or in the other current, will her course be aided from forty to fifty miles a day, or retarded to the same amount."

This Guinea Current is lost in the Bight of Benin, near Prince's Island; which lies under the equator, in the longitude of 7° E., and it is confined and obstructed by a southern polar stream, much in the same manner as the Labrador is affected by the Gulf Stream on the coast of the United States, and which is supposed to be lost near Cape Hatteras.

Beyond the Cape de Verdes, overfalls, rips, and a continual tendency to change in the surface of the ocean, are experienced, as if two great conflicting submarine currents were meeting at some depth beneath the surface.

As we proceeded on our route from Porto Praya to Rio Janeiro, the same appearances continued; but we did not meet the Equatorial

Stream until we had crossed the equator and reached the latitude of 3° S., and longitude 25° W. It was then pursuing its course towards the coast of Brazil, whence passing between the Windward Islands, it finally enters the Gulf of Mexico.

This part of our passage afforded many interesting observations, exhibiting extended rips and the boilings above spoken of, alternating with smooth spaces, and variable currents, setting for a short time in one direction and immediately afterwards in the opposite. All spoke of a conflict of currents, and a forcible mingling of the waters beneath the surface. From Porto Praya to Rio we were influenced by currents, two hundred and eighty miles N. 41° W.

To prove the prolongation of the Equatorial Current to the westward, I shall refer again to other authority, although, as has been seen, we experienced it ourselves on our voyage homewards. In the continuation of the voyage of the Pheasant, Colonel Sabine says:

"On the Brazilian side, from Pernambuco to Cape St. Roque, the northerly current rapidly accelerated, until, in passing the Cape, it may be considered that the Pheasant had entered the full stream of that branch of the Equatorial Current which pursues its way along the northern coast of Brazil and Guiana to the West Indies. Between the noons of the 16th and 17th of July, she was set forty-four and a half miles to the north, and forty-two and a half to the west; making a general effect, in the twenty-four hours, of N. 44° W., sixty-two miles: probably more northerly in the first part of the interval and more westerly in the latter, than the general effect.

"On the day after the Pheasant sailed from Maranham, she entered the current, the full strength of which she had quitted to go to that place, and it was then found to be running with the astonishing rapidity of ninety-nine miles in twenty-four hours. On the 10th of September, at 10 A. M., while proceeding in the full strength of the current, exceeding four knots an hour, a sudden and very great discoloration of the water ahead was announced from the masthead: the ship being in 5° 8′ N., and 50° 28′ W., (both by observation,) it was evident that the discoloured water could be no other than the stream of the Maranon, pursuing its original impulse at no less than three hundred miles from the mouth of the river, its waters not being yet mingled with the blue waters of the ocean, of greater specific gravity, on the surface of which it had pursued its course. It was running about sixty-eight miles in twenty-four hours."

No current of the velocity here mentioned has ever been experienced to the eastward. To what is this sudden increase and rapid flow to be imputed? or to what other cause it can be imputed but to a submarine

stream, flowing directly on the shoal coast of Brazil, and raising the level of the ocean on those banks which it endeavours constantly to restore by flowing off rapidly in the opposite direction?

Before proceeding into the Southern Atlantic, I will recapitulate our results in the Northern.

Beginning at the equator, we find a great surface stream setting to the westward across the ocean, which, passing along the coast of Brazil, enters through the Windward Island passages the Caribbean Sea, and thence into the Gulf of Mexico, whence the water flows in the Gulf Stream, which although at first narrow, soon spreads itself, crosses the Atlantic, and expends its force in mid-ocean, or at times upon the British Islands. This great stream, of moderate temperature on the open ocean under the equator, becomes more heated on the coast of Brazil, and opposite the coast of the United States retains, both in summer and winter, a temperature approaching to or often exceeding 80°. In the mean time, another great stream sets southward, along the coasts of Labrador and Newfoundland; and dividing at the Banks, a branch of this follows the line of soundings off Nova Scotia and the United States, while another flows beneath the waters of the Gulf Stream, passes southwards, and mingles with the waters of the ocean, and affects the surface temperature where it comes in contact with islands and banks. The uninterrupted flow of this vast polar stream is along the coast of Portugal and Spain, and a small part of it flows into the Bay of Biscay, caused by its striking upon Cape Finisterre, and forms eventually the Rennell Current; another part flows into the Mediterranean, in consequence of the higher level of the stream, when compared with the waters of that sea. The main branch now pursues its course on the surface, until Madeira and the Canaries are reached in its course, beyond which it is no longer apparent. But below the surface, as shown by the low temperature of the deep-sea soundings, a submarine stream pursues its way to the equator, where the waters again commence the same round as before.

In the southern portion of the space included within the above limits, is an expanse of water which presents remarkable phenomena. This is called by the name of the Sargasso Sea, and is noted for the quantity of the aquatic plant, known as the gulf-weed (Fucus natans), that is found in it. The general impression seems to be, that this space is occupied by a sort of eddy, in which is deposited all the matter borne by the different currents of the ocean, and that to this cause is due the accumulation of the gulf-weed. It would, however, appear, that this idea cannot be correct; for, in the first place, the weed appears fresher there than when drifting in the Gulf Stream and other currents, and is

therefore nearer the place of its growth; then again, there is no evidence that any drift-wood, or other terrestrial product, is found in the Sargasso Sea; and in the third place, the currents that have already been spoken of, appear rather to set from it, thus indicating that it has a higher level than other parts of the ocean. That such difference of level has a physical cause, there can be no reasonable question.

To connect the previous part of our subject with the currents of the Southern Atlantic, we return to the Equatorial Stream. This was met by us, as has been seen, in latitude 3° S. To avoid the difficulties that this stream may cause, vessels outward-bound ought so to shape their course as to avoid entering it too soon. Should they neglect this, they may be set behind or to the westward of Cape St. Roque. For the same reason, the further to the westward the equator is crossed on the return voyage, the better. These directions have sometimes been ascribed wholly to the winds, which are represented as scant and unfavourable in places other than those which the current would render favourable for crossing the line. This may be in some degree true, for the winds which in these parts of the ocean are always light, may be affected and drawn along with so rapid a stream. The polar origin of this Equatorial Stream will be rendered more probable from the relative temperatures of the parts of the ocean whence it flows, and of those where no current prevails.

On the south coast of Brazil a current is found setting at first to the southwest, and gradually changing its direction to south, until at the mouth of the La Plata it ceases to be experienced, but appears then to incline to the eastward, and spreads itself over the surface of the Southern Atlantic. This is a phenomenon whose analogy to our Gulf Stream cannot fail to be observed, and the resemblance becomes stronger when it is seen that off the mouth of the La Plata it is met by the Patagonian Current, a branch of the Great South Polar Stream, that comes round Cape Horn, and sets along the coast of the country whence it is named. This stream seems, like that of Labrador, to throw a branch (that has been mistaken for an eddy) between the southwest current and the coast. Such at least would appear to be the case from the extent to which low temperatures prevail northwards, as was particularly noted off Cape Frio, and is exhibited in the direction of the isothermal lines on the chart.

The main body of this, or perhaps another southern polar stream that enters the Atlantic, is often encountered on the surface to the northward and eastward of the Falkland Islands. At times, icebergs are borne along by it to the northeast, and in the neighbourhood of those islands the whole sea has been described as occasionally covered

with ice. This circumstance was remarked by Commodore Wadsworth when commanding the Vincennes on a former cruise, and as I learn from him, a French man-of-war was about the same time compelled to go far to the eastward of the Falkland Islands in order to avoid the ice, a necessity which he avoided by keeping close to the Patagonian coast, which at such seasons is the safest route. That ice is thus carried far north into the Atlantic, we had in our voyage a sufficient proof; for every thing indicated our near approach to ice in longitude 54° 30′ W., and in latitude as low as 39° S.

The great space in the middle of the South Atlantic is affected by no more than temporary and partial currents. In particular, near the island of St. Helena, little or no current is ever experienced. This is rendered certain by the fact that vessels, which, in striving to reach it, have fallen to leeward, find no difficulty in beating up. The following directions for reaching the island are found both in Horsburgh and Purdy.

"Before the use of chronometers and lunar observations, navigators were directed, in running for St. Helena, to fall into its parallel fifty or sixty leagues eastward of it, to lie by in the night, and steer west in the day till they made the land: this practice is no longer requisite, for most of the East India ships, homeward-bound, steer now a direct course from the Cape to St. Helena, and make the island by day or night; as they generally know the longitude within a few miles of the truth, there can be little danger of missing it, although this is barely possible, the body and leeward part of the island being frequently enveloped in fog clouds, particularly in the night. Should a ship, in such a case, fall a little to leeward, she will seldom find any difficulty in working up to the anchorage, unless she sail indifferently upon a wind, for the current seldom runs strong to leeward near this island: this, however, may happen when the trade blows strong, with squalls, for a few days, which is sometimes experienced about the full and change of the moon: but this lee-current is generally of short continuance. In time of war, when any of the enemy's cruisers visit St. Helena, they keep to the eastward and southeastward of it, at the distance of fifteen, twenty, and twenty-five leagues. Single ships, which sail well, would avoid these cruisers, were they to make the island bearing from north-northeast to east and southeast, and afterwards make short tacks under the lee of it till they reach the anchorage. I have seen store-ships from England make the island, bearing east-southeast, directly to windward of them, at the distance of fifteen or eighteen leagues; they sailed indifferently, but reached the anchorage the third day after making the island."

The deep-sea temperature near St. Helena proved that the influence even of a submarine polar current was not experienced there.

It would therefore appear that the South Atlantic is the seat of a system of currents, analogous, but simpler in form, than those of the North.

Off Cape Horn, we encountered the Great South Polar Stream, whose strength has had such influence on the progress of vessels, and been the cause of so much disaster to the early circumnavigators. This stream spreads far to the eastward, and Cape Horn divides it into two branches, one of which sets along the west coast of South America, far to the northwards.

The main stream enters the Atlantic, and in the vicinity of Cape Horn is almost as well known as the Gulf Stream on our own coast. It appears to be strongest in the months of August, September, and October, the spring of that hemisphere, and weakest in April and May, or the autumn. It continues its course to the northeast until it appears lost in the South Atlantic, probably sinking beneath the warmer water that has been flowing along the coast of Brazil. Our observations made its greatest velocity seventy-two miles in twenty-four hours, in a direction east-northeast, but its usual rate is about thirty miles in the same time.

One remarkable feature of the water in the neighbourhood of Cape Horn is its very low temperature at great depths. We found it, as has been stated in Chapter V., as low as 28°, at the depth of four hundred fathoms; and although this great depression of temperature was not exactly verified by other observations, yet those made in the vicinity were sufficiently low to render this remarkable fact probable.

That the direction of a great body of water to the northward and eastward, is not confined to the vicinity of Cape Horn, we have one proof in the drift of the icebergs, even beyond the line at which a current is found at the surface, and which must therefore be carried by submarine streams; and another in the observations made by the late French expedition under D'Urville, who found a current setting east-northeast, along the icy barrier to the south of Powell's Group.

It has been stated that the northeast Polar Stream is divided into two branches at Cape Horn. The Chili branch of the stream at first retains the northeast direction, and sets upon the coast of that country, but as it advances it takes a direction more towards the north. This stream is not superficial merely, but prevails to a great depth, or is submarine. This fact is conclusively shown by an observation of Captain Du Petit Thouars in the French frigate Venus in 1837; he found in making a deep-sea sounding in this stream during a calm,

that the line continued to hang vertical during the whole three hours that the observation continued. He justly ascribes this occurrence to the motion of the whole body of water to the north with an equal velocity. The set towards the coast in the more southern portion of the stream is shown by the frequent wrecks on the coast of Chili, and the difficulty which vessels leaving Valparaiso to double Cape Horn experience in obtaining a sufficient offing. This stream, like the others we have spoken of, varies in breadth and strength at different seasons.

We experienced the set of this stream in a decided manner; for the amount of our drifting current between Cape Horn and Valparaiso, was two hundred and fifty-four miles, in a direction north-by-east.

The change in direction from northeast to north takes place about the latitude 37° S., or in the neighbourhood of the island of Mocha.

In our passage from Valparaiso to Callao, we found the waters of a low temperature; but the general effect of current, amounting to one hundred and seventy-one miles, was in a direction nearly due west. The surface Polar Stream therefore seems to be deflected by the bight formed by the coasts of Chili and Peru, but after passing this it again receives its direction to the north.

Off Callao this stream is confined to narrow limits, but is still readily distinguishable by its low temperature, and the drift of the ship to the northwest; the breadth was estimated at one hundred miles.

The Gallipagos Islands oppose an obstacle to this stream, and phenomena of currents occur in this neighbourhood, and particularly around the more southern ones, that are obviously due to this cause, and which the isothermal lines on the chart clearly indicate. By these islands also the stream is divided into two branches, one of which is felt as far to the north as Panama; the other is thrown westward, and merges in the Equatorial Stream of the Pacific.

The temperature of the water around these islands is low, as might be expected from the Polar Current reaching them; and thus may be explained the remarkable fact, that although under the equator, no coral is found there, because the water is below the temperature at which, according to Mr. Dana, the animals that form the coral reefs can live, or at least become numerous; this will hold good with all the coasts washed by polar currents.

Between Callao and Tahiti, after crossing the Polar Stream, we experienced little current. Among the islands of the Paumotu Group none whatever was perceived, and our whole drift was no more than seventeen miles in a direction N. 57° E.

On approaching these islands, the change in the surface temperature

was of the same description as we afterwards experienced in other similar cases, namely, an increase. We thus have a fact to aid in proving that the opinion generally entertained, that on coming into soundings, or near islands, the temperature always falls, is not correct. I am of opinion that this diminution only takes place where polar streams prevail, and particularly if they be submarine. The obstruction throws their waters upward, and mingles them with those at the surface, which causes the low temperature. It would therefore seem as if the existence of polar currents may be shown by a fall of temperature on coming within soundings, and that when this does not occur, it may be assumed as certain, that no polar current prevails in the neighbourhood.

Between the Society Islands and the Samoan Group, it may be said that there are no currents. The distance is about two thousand miles, and our passage occupied fourteen days, during which time the whole amount of drift was forty-three miles in a direction N. 9° W.

On approaching the latter group, the temperature of the water rose a few degrees, indicating, according to the view I have already taken, that there was no submarine cold current.

Around the Samoan Group a current appeared to revolve; for on the southern side it set continually eastward, while on the northern side it set to the west. This current is weakest near the shores, and is not fully developed until at some distance from the islands. This phenomenon has little connexion with the tides, and does not appear to be connected with the general system: at least I have been unable to account for it on general principles. A knowledge of its existence is however of importance to the navigator, as advantage may be taken of the easterly direction of that part to the south of the islands, in beating to windward.

On leaving the Samoan Islands for Sydney, and passing to the westward of the Feejee Group, a current was found setting to the southwest, and this prevails beyond the latter islands.

As we approached Lord Howe's Island and Bell's Pyramid, we met a current setting north, in which direction our drift on the passage to Sydney was one hundred and twenty miles. In the neighbourhood of the first-named island, the temperature of the water fell to 66°. After this, however, and before making the coast of New South Wales, the temperature of the water rose to 73°, and we experienced the effects of a stream that sets to the southward parallel to the coast of New Holland. This current, like the Gulf Stream, is variable in breadth and strength, and at certain seasons of the year runs with great rapidity. The occurrence of this stream renders it advisable that

vessels bound to Sydney, should make their land fall to the northward of the harbour. There is no difficulty in tracing the connexion of this stream with that which we found setting to the southwest, as before noted, near the Feejee Group, which being thrown towards the coast of New South Wales by the South Polar Stream, that meets its course obliquely, it also receives an accession of strength from the waters that flow to the southwest on the west side of New Guinea: ample proof of the existence of such a current is to be found in the difficulty of passing to the eastward of the Barrier Reefs. This stream is analogous to our Gulf Stream, although much less remarkable, and is at times found to extend to the south of Van Diemen's Land, the distance to which it prevails depending on the strength of the polar current which opposes it. Thus, the French frigate Venus met this stream to the south and east of Van Diemen's Land, in the month of January, 1839, and was thirty-six hours in passing through it. It more frequently turns into Bass's Straits, after which it is lost in the sea to the west of Van Diemen's Land, or mingles with the Polar Current.

We experienced the effects of this stream as well after we left Sydney as before our arrival there, but our course speedily led us beyond its influence. The current which afterwards affected us on our way south, set to the northward and eastward, and was found at its greatest strength near Macquarie's Island, where its set amounted to thirty miles in twenty-four hours. As we approached the Antarctic Continent we gradually ceased to feel its effects, until upon the icy barrier little or no current could be perceived along its whole extent. Our means of observation partially failed us here, as has been mentioned in the Narrative. It would appear, however, from a comparison of the position of the icy barrier as seen by us, with that laid down by Captain Ross, after the lapse of a year, that there may be a slight drift to the northwest, towards which direction the barrier appears to have shifted in the interval.

On the return of the Vincennes to the north, the northeasterly current was again experienced, and particularly between the latitudes of 50° and 60° S. The Porpoise, whose track was to the eastward of that of the Vincennes, found its direction more to the eastward than we did. As we entered lower latitudes, we found it veering more and more, until finally it became due north.

Pursuing its course in the last-named direction, it strikes the southern point of New Zealand, and forms currents on each side of that country, which, however, are not constant. That branch which flows on the western side appears to be the strongest, and is felt as far to the north

as Cook's Straits. The current which flows on the eastern side, forms an eddy to the north of the islands.

We must here note, although we did not ourselves enter it, the polar stream which sets upon Cape Leeuwin, the southwestern promontory of New Holland. According to Captain Flinders, whose statement is corroborated by French authorities, this stream appears to be divided at the cape; and both of these branches were found to set with great velocity for a short distance to the north and east of that cape. The branch that sets eastward along the southern coast of New Holland, has at first a velocity of as much as twenty-seven miles in twenty-four hours; the other branch, setting north, has a velocity of from twenty to thirty miles. All authorities agree that both of these velocities are rapidly diminished, and at times the eastern branch is felt feebly beyond Bass's Straits. The northern branch follows a line parallel to the coast, and on reaching the north coast of New Holland, is deflected again, and flows off to the northward and westward.

On our return to Sydney from the Antarctic cruise, we again encountered the warm stream; and being now aware of its existence, I was able so to shape the course of the vessel as to pass out and into it again as we ran up the coast. The temperature of its waters was found to be 75°.

In crossing from Sydney to New Zealand, on leaving the coast the same current was found to exist, both by the temperature and the drift of the ship. We also passed over what is called by the whalers, the Middle Ground, and while we were in it no current was found to prevail, a circumstance to which I shall have occasion to refer hereafter.

Between New Zealand and Tonga the currents were variable, and their general effect was a drift of one hundred and eight miles in a direction S. 88° W. On this route we passed the Kermadec Islands, and through the latitudes where the southern polar streams seem to be lost.

On leaving Tonga, we soon met with the current existing among the Feejee Islands. This current sets through the eastern range of these islands to the northeast, as observed by the Porpoise during her survey of that portion of the group, and as shown by the manner in which the casks of the whale-ship Shylock, wrecked on Turtle Island, were carried to Fulanga, where they were picked up. We also experienced the same current in the drift it caused on the first night of our arrival off these islands. A strong current also sets to the eastward, on the southern side of the Feejee Group. I had here to regret the loss of our deep-sea sounding apparatus, the importance of which in

detecting the presence of cold submarine streams previous experience had satisfied me. I felt, however, convinced that the Feejee currents arose from them as a cause, and my views were corroborated by the fact that the Peacock on her voyage from Sydney to Tongataboo had been affected by northerly currents.

I have mentioned cases in which the Polynesian Islands were occasionally affected by the remarkable phenomenon of a sudden rush of waters. I am inclined to ascribe this phenomenon to the action of a polar current encountering obstructions at the several groups, for I know of no other cause so likely to produce such results; and it will have been seen that the sides of the islands that were most affected, were those that would have been exposed to the full violence of a stream setting from a higher to a low latitude, while the action on the opposite side was either much diminished or wholly insensible.

After leaving the Feejee Group, we did not experience any current until we reached the latitude of 8° S., and there only in separate impulses. We then experienced currents for three or four days, whose united effects amounted to no more than twenty or thirty miles, in a direction about south by west. In passing the Phœnix Group we experienced a variable current; and little seems to exist there at the season when we passed it; but in the following January, when the Peacock was at this group, a current was found setting to the westward, which was lost on passing a degree or two to the south. In this voyage of the Peacock, a space in the ocean was traversed remarkable for its elevated temperature, which was as high as 89°. The waters of this space, therefore, do not enter into the general circulation. This position will be seen upon the map, marked in deep red, and may be compared with the similar *nuclei* in the North Atlantic and near the Cape de Verdes.

On our route to the northward we crossed a stream setting to the westward, which extends as far west as the Kingsmill Group, between the latitudes of 2° S. and 3° N., after leaving which we encountered another, setting with equal velocity to the east, between the latitudes of 4° and 9° N. This last tropical counter-current was traced by us between the same parallels, nearly across the Pacific, from the longitude of 170° E., to the longitude of 138° W. We had no opportunity of ascertaining ourselves whether it exists to the westward of the Mulgrave Islands, but Horsburgh and several other authorities mention the prevalence of an easterly current as far to the west as the Sea of Celebes, and particularly in the latitude of 4° N. After passing the parallel of 10° N., we began to feel the effects of the current that is ascribed to the influence of the trade-winds, and this continued without

much diminution in its strength, until we lost the trades in latitude 19° N. The drift by this current was two hundred and seventy-one miles, in a direction S. 71° W.

At the Sandwich Islands, I am not disposed to think, from any observations I had an opportunity of making, that there are any regular currents, or any set of the waters, except what is caused by the winds. There is in fact rarely any difficulty in beating to windward; the time of passing between the islands is about the same at all seasons of the year; and I found none in beating up to my port in a reasonable time, after falling to leeward of it. Their position is assimilated to St. Helena. The temperature of the waters around these islands is about the same as that which prevails in the ocean in the neighbourhood, a fact which, as I have already stated, I consider to be a proof that no polar current reaches them.

Our passage from the Hawaiian Group to the Northwest Coast, gave interesting results in relation to the currents. They were irregular until we reached the latitude of 37° N.; after which we were strongly affected by a southeast current, whose influence continued until we reached the coast of Oregon. At this time it ran at the rate of fifty miles in twenty-four hours; but when the Peacock traversed this same space, ninety days later, the velocity had not only diminished, but what current was found, was nearly in an opposite direction. In relation to the extent of this southeast current in the months of March and April, I have no precise information, nor can I supply it from others, since those who had previously visited this part of the ocean had not paid sufficient attention to this subject to furnish any precise data. All however agree in the fact, that they were affected by a southeast current after reaching the longitude of 130° W., and the latitude of 35° N.

Within the space embraced by the meridians of 145° and 160° W., and the parallels of 28° and 35° N., the currents appear to lose themselves; and this is therefore to be considered as a nucleus.

This southeast current may be either a return of an equatorial current, or a direct polar stream. Its temperature would rather lead to the latter conclusion; yet there is an equatorial stream on the opposite shores of the Pacific, flowing to the northeast: this is well known to exist on the coast of Japan, extending to the Aleutian Islands, and passing northwards along the coast of Kamtschatka. Of its existence off the latter country we have many satisfactory proofs, and more particularly those of Captain Beechey on the temperature of the sea which he found in latitude 67° N., near the Icy Cape. The latter fact leaves no doubt that the influence of a current coming from a

tropical climate must extend thus far, which is the most remote point at which any such stream has been positively known to exist. It may, however, be connected with the strong easterly current that is constantly setting through the Icy Sea, as has been noted in all the voyages in search of a Northwest Passage. At the Aleutian Islands the stream appears to divide, and a branch continues on, at first in a northeast direction, but, gradually changing its course, takes a sweep along the line of the coast of America, and merges in the northeast stream of which we have spoken above. This stream, which passes the Aleutian Islands, is doubtless an equatorial one; its low temperature may be accounted for by the fact of its being mixed with water coming through Behring's Straits by an under-current from a polar region; this latter being obstructed by the Aleutian Islands, would cause it to be mixed with the surface water, and be carried therewith to the coast of America. It is clear, from the narrow space at Behring's Straits, that no great quantity of water can pass as a submarine current from the Arctic Ocean, to produce any remote effects.

On our return, in passing from the Hawaiian Group to the Marianes, we experienced a slight current setting to the westward, which may be ascribed to the trade-winds. After passing the latter islands, we found a current setting to the northward, being in all probability connected with the stream that flows along the coast of Japan. This direction prevailed until we reached the straits by which we entered the China seas.

I need not speak of the currents in the China seas, as they are well known to be influenced by the monsoons, and, therefore, far from constant. Now, as the southwest monsoon has a tendency to increase the Equatorial Stream, and give the waters a direction to the northeast, we may find in this remote region the cause by which the velocity of the southeast current on the northwest coast of America is accelerated at the very season in which such influence might be expected to reach those shores.

On our track from the China seas towards the Cape of Good Hope, we met with but little current until we approached the east coast of Africa. We had, during this part of our voyage, an opportunity of trying the deep-sea temperature daily, having received several self-registering thermometers, which I had sent for to replace those we had lost. These observations confirmed the impression that this portion of the ocean is but little liable to submarine streams.

On approaching the east coast of Africa, we found ourselves at first influenced, as mentioned in the Narrative, by the Polar Stream, then,

as we neared the coast, by the equatorial stream that sets down the Mozambique Channel. This stream is usually confined to narrow limits, but at some seasons becomes strong enough to throw its waters in a southwest direction beyond the Aguillas Bank. There is little doubt that this equatorial stream is superficial, overlying the Southern Polar Stream, a portion of which latter, touching the Aguillas Bank, is forced up by that obstruction to the surface. This is evident by its reducing the temperature of the waters on soundings at the Cape to 62°. This Polar Stream is divided by the Cape: the eastern part sets along the east coast of Africa as a submarine stream, and on reaching the island of Madagascar is found to flow north, along its west shores. The other and larger portion is deflected, and flows to the northward, along the west coast, and finally forms the Great Equatorial Stream of the South Atlantic.

We have seen that a great equatorial stream, flowing westward, is found both in the Atlantic and Pacific. One also, according to Horsburgh, exists in the Indian Ocean, in the latitude of 3° N., which may be traced to that polar stream which we have seen to flow along the western coast of New Holland, and which must of necessity sweep the coast of Java and Sumatra. This stream has in the Indian Ocean been observed to flow at the rate of fifty-six miles in twenty-four hours. Upon the same authority, it appears that on the Malabar coast a current sets constantly to the southward.

About the Chagos Archipelago, the currents are periodic, setting west and northwest during the prevalence of the southeast monsoon, and southeast in the months of December and January, when the wind blows from the northwest. About the Comorro Islands, on the contrary, the prevailing current is from the westward; and off the north end of Madagascar, likewise, a westerly current prevails throughout the year. On this account the ports of that island are difficult to make, and ought to be approached from the windward, as it would be difficult to beat up to them against the current.

In the Mozambique Channel, a current sets northward, along the western shore of Madagascar; while on the coast of Africa opposite, the water sets almost continually to the south. But on the same coast to the north of the line, a weak current is found setting towards the Persian Gulf, and thus causing the current we have stated to run southwards on the Malabar coast.

The Equatorial Stream of the South Atlantic may be cited as furnishing a good instance of the effect that currents may produce on climate. It always includes the island of Anno Bon within its influence, while St. Thomas, in longitude $6\frac{1}{2}°$ E., and immediately under

the equator, is only affected by it at times, and Prince's Island is never reached by it. The manner in which their climates are influenced by this circumstance is thus described by Colonel Sabine:

"The occasional advance of the cold water of the Equatorial Current to the island of St. Thomas, may assist in explaining an apparent peculiarity in the climate of that island, when compared with the climate of the coast of Western Africa generally. At all the British possessions, from the Gambia, in latitude 13° N., to the forts on the Gold Coast, the months of June, July, and August, are accounted unhealthy; whilst at St. Thomas's, on the contrary, they are the most healthy in the year to Europeans, although they are not so to the negroes, who suffer much from colds and rheumatisms during their continuance. It has been shown that the water of the Equatorial Current is from ten to twelve degrees colder than that of the Gulf of Guinea, and that its northern border, which at other seasons passes the meridian of St. Thomas at a distance of from one hundred and twenty to one hundred and eighty miles south of its southern extremity, was found in June in contact, or very nearly so, with the island itself; and it is not improbable, from a consideration of the causes which occasion its advance towards the equator when the sun is in its northern signs, that in July it may extend so far as even to include the whole island of St. Thomas within its limits.

"The temperature of the air is known to be immediately dependent on that of the surface water of the sea, and to be influenced nearly to the full extent of any alteration that may take place therein. In crossing the Bight of Biafra, from Cape Formosa to St. Thomas's, the air, over the surface of the Guinea Current, observed in the shade and to windward, at sunrise, noon, and sunset, averaged 81½°, the extremes being 79° and 83½°; whilst in the passage from the river Gaboon to Ascension, over the Equatorial Current, the air averaged only 74°, the extremes being from 73½° to 74½°, a part of the passage being, moreover, on the very edge of the two currents, and within sight of St. Thomas's. The vicinity of the Equatorial Current, therefore, when the sun is in the northern signs, cannot fail materially to influence the temperature of the island, (particularly as the wind is always from the south,) and thus to affect its climate. Situated on the equator, St. Thomas's has naturally two cold seasons, or winters, in the year, the sun being equally distant in June and in December; but in June, July, and August, is superadded the influence of the surface water of the ocean, several degrees colder than in November, December, and January; rendering the months of June, July, and August, pre-eminently the winter of St. Thomas's; in which the natives complain of colds

and rheumatism, and the health of Europeans is less affected than at other seasons, because the climate is then less dissimilar than usual to their own.

"The comparative unhealthiness of Prince's Island to that of St. Thomas's, and of both to Anno Bon, as the residence of Europeans, has been frequently and particularly noticed by Portuguese authorities, and is universally recognised at Prince's Island and at St. Thomas's. It may be a sufficient explanation to remark, that Anno Bon is always surrounded by the Equatorial Current; Prince's always by the Guinea Current; and that the position of St. Thomas's is intermediate, and its climate is occasionally influenced by both. In tropical climates, a very few degrees of temperature constitute an essential difference in the feelings of the natives, and in the health of Europeans."

In taking a general view of the facts which have been stated, it will appear that, towards the western sides of the North and South Atlantic, of the North and South Pacific, and of the Indian Oceans, streams of heated water, making their way from low to high latitudes, prevail. These in the two northern oceans become easterly, setting towards the opposite continents, causing, beyond all question, the comparatively equable and elevated temperature that is found on their western coasts, and which so peculiarly distinguishes the climate of the British Islands. To keep up the equilibrium of the ocean, the body of water thus thrown from the equator towards the poles, must, after being cooled and rendered more dense in the higher latitudes, return towards the equator; and the mode in which at first sight it might be expected to do this is by currents wholly submarine. But the influence of the returning water is felt at the surface also, forming the surface polar streams, of which we have spoken. Those which come from the great body of ocean in the southern hemisphere are directed upon the projecting points of the continents and great islands, Cape Horn, the Cape of Good Hope, Cape Leeuwin, &c., where as a general rule, they are divided into two branches. The easternmost of these meet the equatorial streams, of which I have spoken, whose direction they change, modifying or checking their progress towards the poles, and forming what I have termed the nuclei. In the North Atlantic, we have seen that a part at least of the North Polar Stream divides upon Cape Finisterre, passes into the Bay of Biscay, assuming the form of a surface current allied to an eddy, called the Rennell Current, while its main branch pursues its southern course along the coast of Portugal, and finally again becomes wholly submarine.

On the western side of the North Atlantic, in the higher latitudes,

flows the Labrador Stream, a current so powerful that we can hardly ascribe its origin to the return of the tropical waters of the Atlantic alone; and this, it is thought, may be a portion of the Equatorial Stream of the Pacific, which, after entering the Icy Sea at Behring's Straits, and forming the current which sets eastward, on the northern shores of America, enters the Atlantic, through the many passages of that labyrinth of islands and icebergs, and finally returns, to be again heated in the tropical climates of the Atlantic.

There is unquestionably a greater body of colder water lying at depths in the equatorial regions of the Atlantic than can be accounted for in any other manner than by submarine streams. Separate observations, made in the Vincennes, Porpoise, and Oregon, at different places during the return voyage, exhibited the same low temperature at a depth of one hundred fathoms, within a zone lying between the parallel of 3° S. and 3° N. The observed temperatures in the several vessels differed only a degree from each other, and they agreed nearly in the breadth of the first zone. I feel satisfied that the one first met with was connected with the cold submarine stream our deep-sea temperatures showed when near the Cape de Verdes, on the outward voyage. As we crossed the South Atlantic without noticing any phenomena of this kind, it may be safely asserted that this body of cold water therefore comes from the north.

But to return to the western branches of the polar streams that set upon the two great promontories of the old and new continents: these are deflected by the land, and in their new direction flow onwards to the equator, and are merged in the western equatorial streams, which, directed upon the eastern coasts of the opposite continents, and warmed by exposure to the sun, become the heated streams with which our recapitulation commenced.

The number of recorded facts is as yet too few to furnish any thing like sufficient satisfactory data inductive to any theory; there can be no doubt, however, that the great and sufficient cause is the unequal distribution of heat over the earth's surface. How the streams, currents, and counter-currents are affected by the continents, is within the reach of legitimate inquiry; but how the character and form of the bed of the ocean may influence them, seems at present beyond investigation.

The best possible information on the currents is of great importance to the navigator; next to the winds they claim his attention; the winds in their turn are very much influenced by the former.

The great and at times perplexing variations of currents have been felt by all navigators: these it will be at once seen may be attributed

to the anomalous periodic changes that are known to occur, placing all calculations at nought.

The trades, the monsoons, and other steady or periodic winds, as well as the variable winds of the temperate zones, are either caused or much influenced by the manner in which temperature is distributed over the surface of the ocean, by the polar and equatorial streams. It is therefore proper that, as immediately connected with this subject, we should mention the spaces which lie between the zones of the trade and westerly winds, and which are usually the seat of light variable winds and calms. The existence of such a zone in the North Atlantic has long been known, and we have assured ourselves of the existence of similar zones in the other oceans, though not to so great an extent. They lie on each side of the parallels of 30° in both hemispheres, and are about three hundred miles in breadth. Leaving out of account the effect of the great currents of the atmosphere, we find this space to be a sort of eddy, in which the polar and equatorial flow of waters neutralize each other, and where therefore, all the floating matter that is brought by both must accumulate. I shall have occasion to refer to this view of these zones hereafter, as connected with the subject of whaling.

If, however, the view I have taken of the flow of the waters of the ocean and their results be correct, which the facts we observed and those I have quoted from the authority of others, scarcely leave a doubt of, we may see the admirable provisions of nature by which the Creator has regulated the fluid mass of the ocean, in its endless gyrations seeking to attain a state of equilibrium which it never reaches, at the same time and by the same course distributing the excess of the tropical heats throughout the whole surface of the globe, and bringing towards the equator the icy masses which would otherwise accumulate in the frozen zones.

But, putting aside the partial observations that have been detailed in the preceding pages, relative to the direction and extent of the great streams and currents of the ocean, whether surface or submarine, the habits of the spermaceti whale alone would furnish strong circumstantial evidence that such currents do exist, and that they are variable in their strength, and even in direction, according to the season.

It is well known to whalers that the favourite and appropriate food of the sperm whale is a gelatinous medusa; which, however, has not as yet received from naturalists much attention. It may, however, be advanced as certain that this molluscous animal most abounds in the higher latitudes of both hemispheres, which would therefore seem to be the places in which it is produced, and to which its habits are best

adapted.* During our cruise in the higher southern latitudes, we saw vast numbers of these medusæ around and near the icebergs. The quantity was such as to prove conclusively, that it was in the waters of the temperature caused by the vicinity of these masses of ice, that they delight to dwell. Whales were also in abundance, and although principally of the fin-back species, sperm whales were not entirely wanting.

As regards the medusa, its powers of locomotion are feeble, and confined chiefly to the purpose of rising and sinking at pleasure. If polar currents exist, it must therefore be swept by them from the place of its nativity, and in its passage to lower latitudes, will by its locomotive power seek strata in the water of the low temperature to which its constitution is best adapted. My attention was drawn to the habits of the whales here in particular, from the novel manner they exhibited of feeding near the surface, instead of diving lower down, as they are usually seen to do in lower latitudes: they were constantly in sight, instead of being only seen at intervals.

It will be readily admitted that the medusa, like other animals, has its appropriate seasons of procreation, and it will appear probable that the season at which we saw them in such numbers was that in which they are brought forth most abundantly. So also, however low the temperature of the water in which they delight, there is little probability that their increase goes forward when the regions in which we met them are locked up in ice, and the genial light and warmth of the sun is denied them.

The food of the sperm whale will therefore be borne off to lower latitudes by the polar streams in greater abundance at one season than another, and this former season corresponds with that in which these currents have their greatest force. The sperm whale, it must be expected, will leave the higher latitudes and follow the currents which transport his food.

In conformity with this view, we find the habits of the sperm whale migratory. The polar currents, as has been seen, disappear from the surface in many cases, but do not cease to flow; and even when felt both at the surface and below, they will in approaching lower latitudes have their higher temperatures near the surface. The medusa will therefore descend in either case to greater depths, and the whale must dive in quest of the food which in higher latitudes he could find at the surface. We have seen in what a decided manner the polar currents

* Innumerable animalculæ, the appropriate food of the right whale, are also found there, as has been seen by our own observations at the south, and those of Scoresby at the north.

become or continue superficial at the southern promontories of the continents. A similar cause, operating to a less extent, raises them, if submarine, when they are interrupted or impeded by islands, and spreads water of low temperature over the surface. Here then, at the proper season, the food of the whale will be not only more accessible, but more abundant within a given space, in consequence of the check the velocity of the stream must experience.

So also in the zones of calms we have seen that the matter borne by the polar currents in all probability finds a resting-place; and here also, at fit seasons, the food of the whale must be abundant. Points possessing either of these characteristics I have distinguished, as before stated, by the name of nuclei.

However satisfactory this theory may be in explaining the causes of the migratory habits of the sperm whale, it is obvious that we do not know enough of the natural history of his favourite food, nor of the rate and course of all the submarine polar currents, to enable us to predict with certainty the seasons at which he will be found in particular parts of the ocean. This can be learned by observation alone, and long experience has taught those who are skilful in the whale-fishery the position of the favourite haunts of their prey, and the times at which they are most likely to be met with there. Comparing these points and the nuclei of the currents, as observed and explained in the preceding pages, the coincidence will strike every one who will examine the subject; and when all the facts necessary to illustrate this subject shall be ascertained, theory may serve in some degree to shorten the apprenticeship which is now necessary in order to acquire the requisite knowledge of the places and seasons wherein to meet the game in this adventurous employment; the object therefore of the residue of this chapter will be devoted to whaling, and to point out the results which our own observations, with the information derived from others, has afforded.

The whaling interest, taking into consideration the extent to which it has been carried by our countrymen, may be almost claimed as peculiarly American. There are few employments in which the enterprise and industry of our countrymen are so well developed as in this, or in which so much hardihood or so many resources are required to insure success.

Our whaling fleet may be said at this very day to whiten the Pacific Ocean with its canvass, and the proceeds of this fishery give comfort and happiness to many thousands of our citizens. The ramifications of the business extend to all branches of trade, are spread through the whole Union, and its direct or secondary influence would seem to

recommend it to the especial protection and fostering care of the government.

As it was among the first objects of the Exploring Expedition to render the dangerous path of these enterprising mariners more safe, I trust it will have been perceived, that throughout the operations of the squadron, this interest has never been lost sight of. In fact, it has always been my constant study to endeavour to accomplish whatever could tend to its benefit. In the course of the various and devious voyages we have made, the greatest attention has been paid to the winds and currents; and from my investigations, I hope to be able to point out the most feasible routes by which to gain the proper cruising-grounds, and to define their localities more clearly than has hitherto been done.

Among other duties, we were called upon to administer chastisement for the murder of portions of the crews of whale-ships, as well as of persons belonging to the squadron, which was done not as a vindictive retaliation, but to convince the natives that their attacks on vessels bearing our flag cannot pass with impunity.

In all places we have endeavoured to foster a good feeling, to establish a system of fair dealing, to win confidence, and to act justly. The knowledge of the native character which I have obtained, and have recorded in the preceding pages, will, I hope, be of use in preserving a good understanding between them and those who follow us; rules and regulations were agreed upon in many places with the chiefs, for the purpose of rendering the property and lives of our citizens more secure in their visits to the ports of the islands; and it is to be hoped that they will be strictly observed on the part of American vessels.

The Expedition has done much by its surveys and explorations to make the islands, their anchorages and harbours, better known; and very many doubtful shoals, reefs, and islands have been carefully searched for. Particular information respecting these dangers will be embraced in the Hydrographical Memoir.

Our whaling fleet now counts six hundred and seventy-five vessels, the greater part of which are ships of four hundred tons burden, amounting in all to two hundred thousand tons. The majority of these vessels cruise in the Pacific Ocean. Between fifteen and sixteen thousand of our countrymen are required to man these vessels, half of whom go to sea for the first time as "green hands," and return after a voyage of fatigue and hazard, transformed into sailors.

The value of the whale fleet is estimated at not less than twenty-five millions of dollars, yielding an annual return of five millions, ex-

tracted from the ocean by hard toil, exposure, and danger. The estimated quantity of oil imported into the United States is about four hundred thousand barrels, nearly one-half of which is sperm oil.

It might be said that the employment of so large a number of persons is not constant, because many of the vessels are always to be found in our harbours. But it is well known that the same number of hands are employed in port as at sea; and I believe, from my own observation, and the statements of others, that so far from falling below the estimate, the number of persons actually engaged in this business would greatly exceed the registry of the crews, as our ships are constantly in the practice of taking on board extra hands from the Azores, Cape de Verdes, and South Sea islands, which would probably amount to an eighth or a tenth more.

The number of those on shore to whom this branch of business gives employment, will readily be admitted to be twice as great as that of the crews. When we add to this profitable occupation of so many persons, the value of the domestic products consumed by them, and the benefit that is thus conferred upon both our agricultural and manufacturing interests, the importance of this branch of business will appear greatly enhanced.

By a large majority of persons, it is believed that the whale-fishery is a mere lottery, in which success is more owing to good luck than to good management. Those, however, who entertain such an opinion, are in error. There is, perhaps, no employment on the ocean wherein a sound judgment is more necessary, and no business where success depends more upon the experience, enterprise, and industry, of the commander, than in that of whaling.

Voyages may indeed be made by incompetent persons, and by fortuitous circumstances success may be obtained; but those who are well acquainted with the business, will almost certainly "fill up" in the time allotted to a voyage, and frequently in a much shorter period.

There are two kinds of whales that are principally the object of search by our whalers. These are the sperm whale (Macrocephalus) and the right whale (Mysticetus). These two animals differ exceedingly, both in their form and in their habits. The first is furnished with teeth, the last with a collection of laminæ; they are therefore adapted to different kinds of food: the former feeds on the large medusæ of the ocean, termed by the whalers squid; the other on small crustacea, and small fish. Their feeding-grounds are seldom in the same places; for, while the latter frequents the coasts and bays, the former is seldom found except in the deep sea, and generally far from the land.

Whales of the two different kinds are easily distinguished at a distance by the experienced, from the volume of their spout; its direction and elevation; the number of times it is repeated; the manner in which they dive; the length of time they disappear; and the body they expose to view.

I shall now proceed to point out the cruising-grounds, and explain the operations of the whalers, directing my attention first to the sperm whale fishery, not only because it is the most valuable, but because it depends more upon the skill and information of those engaged in it.

The master of a whale-ship should be a good seaman and navigator, well acquainted with the winds and currents, as well as with the cruising-ground of his prey. When he is thoroughly acquainted with these, and possesses a good ship, with a spirit of perseverance and energy, there is little fear of his returning home with a "clean ship."

The principal whaling-grounds in the Pacific are shown on the map annexed to this chapter; they are confined particularly to spaces which have been known in the Pacific Ocean by names well understood among the whalers, such as the "on-shore ground" and the "off-shore ground," "middle ground," &c. These spaces, however, have wide limits; thus, for instance, the "on-shore ground" embraces the whole extent of ocean along the coast of Chili and Peru, from the island of Juan Fernandez to the Gallipagos Islands; and the "off-shore ground" the space between latitude 5° and 10° S., longitude 90° and 120° W.

The following list embraces all the different grounds in the Pacific visited by our whalers.

1. The on-shore ground.
2. " off-shore ground.
3. In the neighbourhood of the Hawaiian Islands.
4. " " Society Islands.
5. " " Samoan Group.
6. " " Feejee Group.
7. " " Kingsmill Group.
8. Along and to the south of the equator, from the coast of South America to the Kingsmill Group.
9. Across the South Pacific, between the parallels of 21° and 27° S.
10. " North " " " 27° and 35° N.
11. In the neighbourhood of the east coast of New Zealand.
12. The Middle Ground, between New Holland and New Zealand.
13. The coast of Japan, and between it and the Bonin Islands.
14. The northwest coast of America.
15. Coast of California.

These, it will be seen, embrace a large field, and it might be sup-

posed that a ship could hardly miss finding the animals. Such, however, is not the case. A vessel may visit all these places, and yet return home a "clean ship," if she happened to be out of season. It appears from experience that whales in their migrations congregate in the above-named places at certain times of the year, and those who are acquainted with the business endeavour to be early on the cruising-grounds. I shall now point out the times, according to the best information, at which the whales visit the several grounds, and although not a whaler, I hope to give such information as may be useful to this adventurous class of my countrymen.

For convenience of description the cruising-grounds may be considered as included within four distinct sections or belts.

These belts are from twenty to twenty-five degrees of latitude in width.

The first of which I shall speak is that between the equator and the northern tropic; the second, between the tropic and latitude 50° N.; the third, between the equator and the southern tropic; and the fourth, between the southern tropic and latitude 50° S.

Within the tropics, whales are almost always to be met with. There are, however, particular places within this zone where they chiefly congregate. Whales are found in the first belt on the north side of the equator, to the southward of the Sandwich Islands, and thence westward as far as the Mulgrave Islands, for the greater part of the year; but the only spot or space they are known to abound at any particular season within this belt, is to the westward of the Gallipagos; they pass and repass over the rest of this space in their migrations, and may generally be found near to, or around the small islands.

In the second belt, they range from the coast of Japan to the northwest coast of America, and California; this they frequent from May till November. In the month of July they are found off the Bonin Islands, and between them and the coast of Japan. They frequent the space lying to the northward of the Hawaiian Islands, and comprehended between the parallels of 28° and 35° N., and within the meridians of 145° and 165° W., from June to October; and resort to the northwest coast of America in August and September; and to that of California in November and January.

The third belt comprises the ocean from the coast of South America to the Kingsmill Group, including the Marquesas, Society, and Friendly Islands, the Samoan and Feejee Groups. Within these are the spaces known as the "on shore and off-shore grounds." The latter the whalers frequent from November to February, and along this third belt they are found until the months of July and August, by which time they

reach the Kingsmill and Feejee Groups. There are, however, stragglers to be met with in this space during all seasons.

The fourth belt extends from the southern tropic to the latitude of 50° S. The most profitable time for cruising within it is in the months of March, April, and May, to the eastward of New Zealand. After that date, along and between the parallels of 22° and 28° S., from the coast of New Holland to that of South America. The portion of sea between New Holland and New Zealand, is called the "middle ground," and is frequently found very profitable.

From an examination of the particular localities in which whales are found most numerous at certain seasons, and connecting these with my own observations on currents, I am induced to believe the places of their resort will point more correctly to the neutral points, or spaces of no current, than any other data that we yet possess.

These must naturally become the rendezvous or feeding-places of these animals. The determination of these points will therefore throw additional light on the system of currents in the ocean, by pointing out the neutral spaces. The chief resort of whales will be seen on the map at one view; and when these are connected with the currents shown to exist by the observations of the Expedition and others, they will be found to correspond in a remarkable manner with the neutral spaces.

I have myself paid much attention to acquiring information in relation to the position of these grounds, from the masters of whale-ships, but have usually found their reports at variance one with another, and they have sometimes differed as much as five degrees in assigning their limits. Their position, no doubt, varies much in different years; but even this will not explain all the discrepancies of the statements.

If we examine the seasons of the appearance of whales at certain islands, they will generally be found to be between the beginning and the end of the summer of the climate, during which time animal life is most prolific, and the food of the whale consequently abounds near the particular group. I have frequently been told, and it is generally believed, that whales are partial to warmth, and frequent few places outside the tropics. This, if true, would be singular enough; but the main reason for their frequenting the summer seas at particular seasons is the procurement of food, which is there to be found in greater abundance; and there appears to be little doubt that in migrating, these animals move with the currents, until they find their food in plenty, and then continue in such locality until it is exhausted.

A number of instances are known, as will be seen by referring to the Track Map, which will be found in the atlas to these volumes, in which, at certain seasons, strong currents have been experienced in places

where, three months afterwards, they were found to have ceased altogether, or even to have changed their direction. I have now particular reference to the Northwest Coast.

Having pointed out the different belts in the Pacific, I will now refer to the localities in the Atlantic and Indian Oceans, where the sperm whale fishery is most successful.

These, in like manner, are found to correspond, and are connected with the obstructions of the submarine currents, or the places where, from opposing causes, they become lost.

In the Atlantic Ocean:

1. Off the Azores or Western Islands.
2. " Cape de Verdes.
3. North of the Bahama Banks.
4. Gulf of Mexico.
5. Caribbean Sea.
6. To the eastward of the Windward Islands.
7. North coast of Brazil.
8. South coast of Brazil.
9. Carrol Ground, or a space of ocean lying between St. Helena and Africa.

In the Indian Ocean:

1. Off the southern end of Madagascar, and between it and Africa.
2. " northern end " " " " "
3. The coast of Arabia.
4. West coast of Java.
5. Northwest coast of New Holland.
6. South coast of New Holland, and between it and Van Diemen's Land.

The periods or times allotted to these fisheries coincide with the times at which it might be expected that the food of the whale would be most plentiful if brought by the polar streams.

The Atlantic fishery is for the most part carried on in a smaller class of vessels than those used in the Pacific; the voyages are of less duration, and less capital is therefore required in this business than the other. In speaking of cruising-grounds, I shall follow the order in which they are visited.

The first in point of time is that near the Azores. This ground does not extend more than two hundred miles from these islands, and lies principally to the southward of them. Here whales are found during the summer months, and as late as October. These islands, it will be well to remark here, lie in the route of the Great North Polar Stream, and form an obstruction to its passage; consequently the food is arrested in its progress and is accumulated here.

The next ground visited is off Cape Blanco and the Cape de Verdes, and it is also searched by the outward-bound ships of the Pacific fleet.

The whalers of the Atlantic next pass to the north coast of Brazil, in the months of October, November, and December, and thence to the Brazil Bank, and off the mouths of the Rio de la Plata, where they fish in January and February; after this they seek St. Helena and the Carrol Ground, which lies from fifty to two hundred miles southeast of that island, towards the Cape of Good Hope. On the latter ground they remain during the months of March, April, and May; and thence they pass to the westward, along the South American coast, to the eastward of the Windward Islands; thence to the Bahama Banks, Cape Hatteras, and along the coast of the United States, home.

The smaller class of whalers seldom extend their cruising to the south of the line; but after they have visited the first two whaling-grounds, they usually pass to the westward, towards the islands of Fernando de Noronha, and thence along the South American coast, till they reach the Windward Islands. They frequent the Caribbean Sea in the months of January and February, and farther to the westward, off the peninsula of Yucatan, and Cuba, in April; after which time they proceed through the Gulf of Mexico, to cruise off the Bahama Banks, and Cape Hatteras, in May. Thence they pass northward, on either side of the Gulf Stream, to the eastern side of the Grand Banks.

In the Indian Ocean, the south part of Madagascar, off Point Dauphin, is visited in March and April; in May, June, and July, the ground off the southwest cape of Madagascar, in the Mozambique Channel, and upon both sides of that channel. The whalers usually recruit in St. Augustine's Bay, where supplies are to be had in abundance, and both wood and water are easily procured. After this they usually spend some time off Cape Corrientes, with the Cape and headlands on either side, and visit the Comoro Isles. Sperm whales are frequently found in numbers among these islands, and ships usually do well in their vicinity. The African coast, from Mozambique to Zanzibar, is good ground, and the latter place is also a good port for repairing.

Some ships extend their cruising during the northeast monsoon, from October to April, to the Arabian coast, but the African is generally preferred. The Chagos Archipelago at times affords some success, but it is very doubtful ground, and has not been often frequented. The proper season is during the southwest monsoon.

The most profitable ground in the Indian Ocean is the west and northwest coast of New Holland, as far eastward as the islands of

Timor, Lombock, and Angier, and westward to the Keeling Islands, including the coast of Java.

On reference to the map illustrative of the currents and whaling-grounds, before referred to, it will be perceived how nearly these grounds coincide with the places wherein, according to the views already stated, the polar streams are obstructed by land or islands, so as either to interrupt their course, or create such an impediment as to change it.

The Sooloo Sea is the only place that remains to be noticed. American ships, however, have seldom gone thither; but some English vessels are reported as having met with much success there.

There are two routes by which our whale-ships can enter the Pacific: one by the Cape of Good Hope and round New Holland; the other, by Cape Horn.

To take the first route, they ought generally to time their departure so as to meet the season off New Zealand in March, and this is also the best course for ships sailing in the autumn from the United States. They will then reach their whaling-ground at the earliest possible season, and place themselves at once in a situation to reap the harvest of which they are in search; and they would, in all probability, have time to refit and recruit after the outward voyage. This is much more important for insuring success in this employment than very many either of the masters or owners are aware. After a few days in port, and a supply of fresh vegetables, they would find both their ships and crews in a better condition to take the sea and keep it. After remaining six weeks or two months on the New Zealand Ground, until the winter season and boisterous weather approach, the vessels should pass to the northward, towards Sunday Island, and thence cruise to the eastward, between the latitudes of 22° and 28° S., or even in a few degrees higher latitude. The lower latitudes are, however, found to be the most frequented by the whale. Along these parallels they proceed as far as the coast of South America, so as to arrive there in the course of the month of September, after passing part of the time to the westward of the islands of Juan Fernandez and Massafuera.

Other vessels reach the Society Islands in June, and thence pass to the westward, in order to meet the season off the Samoan and Feejee Groups; thence again without the tropics to the south, either on the "middle ground," between New Holland and New Zealand, or to a higher south latitude, and again meet the season off New Zealand at the end of summer or in March. Those that reach the coast of Chili

generally recruit in the bay of Talcahuana, or in the port of Payta, in Peru, and are ready to take up the season on the "off-shore ground" in November.

Vessels leaving the United States in the beginning of summer, would do better to take the route round Cape Horn, reaching Chili or Peru in time to recruit before the month of November, at which time they repair to the "off-shore ground," where they remain for one, two, or three months; thence pass to the Marquesas Islands and to the westward of them, and thence to the west, along the equator, as far as the Mulgrave Islands and the coast of Japan. Returning, they proceed to the northwest coast of America, California, and finally reach the Sandwich Islands to recruit by the months of October or November. Other vessels pass directly from the "off-shore ground" to the neighbourhood of the Sandwich Islands, where they spend the months of February, March, and a part of April; they then proceed to the latitude of 30°, and continue their cruising on each side of that parallel between the meridians of 145° and 165° W., until October, when they repair to the Hawaiian Islands to recruit.

It will readily be seen that there is ample room for a vast fleet to operate in these numerous and extensive spaces, without the vessels interfering with each other, and many more might be advantageously employed. An opinion has indeed gained ground within a few years that the whales are diminishing in numbers; but this surmise, as far as I have learned from the numerous inquiries, does not appear to be well founded.

They have indeed become wilder, or as some of the whalers express it, "more scary," and, in consequence, not so easy to capture; but if we consider the numbers that continue to be yearly taken, there will, I think, be no reason to suppose that any great decrease has occurred. On an average, it requires fifty whales to fill a ship, and it would therefore take about five thousand whales annually, to supply the quantity of oil that is imported. This would appear but a small proportionate number, if these animals were as prolific as our herds on shore, when it is considered that they have a feeding-ground of twenty millions of square miles.

The number of right whales captured is to the spermaceti in the proportion of about two to one. The former are principally found on the coasts, in the bays, and even in the harbours, and are far more numerous than the sperm whale. They are pursued to the greatest advantage in small vessels. They frequent the coast of Chili during the summer season, from October to March, and are to be found on the northwest coast of America and that of California, during the northern

summer, or from March to November. On both the east and west coasts of New Holland, as well as on that of New Zealand, they are abundant from September to March, in the bays, where they resort to calve. This, however, they no longer do without molestation, as the shores are now occupied by extensive establishments for taking them, well provided with boats. On the signal from the look-out, the boats are launched, and soon in hot pursuit of the game, which, when killed, is towed into the bay and dragged on shore, where it is cut up and "tryed out."

There are few places which surpass these localities for the commission of all kinds of vice; and in saying this, I have reference as well to those of South and West Australia, as to those of New Zealand, although the latter are the most noted for their enormities. Some merchants, it is said, in Sydney, advance the capital, and share the profits with those who undertake the business. The latter generally engage in their service a large number of natives and some of the lowest whites, whom they allow to indulge in every sort of vice, so long as they can make use of them. Quarrels often take place between the parties engaged in the same business, and the rivalry not unfrequently leads to sharp conflicts and bloodshed.

I am surprised that the British authorities have not taken cognizance of the outrageous acts that are constantly taking place within the limits where they claim authority. One of these acts was made known to me after my arrival at the Bay of Islands, and I regretted the impossibility of repairing to the spot to demand redress. The following is the statement of the master, officers, and crew.

"While the whale-ship Adeline, Thomas Brown, master, was lying at Kapiti, New Zealand, on the 12th of December, 1839, for the purpose of refitting with wood and water, at about 2 P. M., as the third officer and five of the crew were employed in towing off a raft of water; being about one mile from the ship, they were boarded by a whale-boat, having a crew of eight Europeans and one New Zealander, under one James Harrison as headsman, armed with pistols and knives, (being a part of the persons employed by Raymond and Young,) who forcibly took possession of the boat and cut off the raft, threatening instant death to any one who should make resistance. Having thus captured the boat, they at once made sail, and ran for their establishment, on the shore, about six miles distant. The captain, on perceiving the piratical act, at once followed with two boats, but did not succeed in overtaking them until they reached the shore and had hauled the captured boat up on the beach. While on his way he was pursued by another boat, which kept firing at him. The captured boat was

surrounded on the beach by from thirty to forty desperate-looking wretches, more or less armed. Of these, Harrison became the spokesman, declaring that they had taken the boat and meant to keep it, at the risk of his and all the party's lives, to which speech they all signified their assent. Captain Brown repeatedly cautioned them against such acts of piracy; but his caution was received with curses and all kinds of abuse, and finally a pistol was presented, with the declaration that he, Harrison, would blow out the brains of Captain Brown if he attempted to rescue the boat."

Such has been the indiscriminate manner in which the whales have been slaughtered, both old and young, that these haunts have of late years been less frequented by them.

The right whale is found of much larger size in high latitudes than in low, and not unfrequently yields, when taken in these latitudes, as much as one hundred and eighty barrels of oil. Besides the oil, the whale-bone produces some profit. A large number of these whales were seen by us in the bays about Cape Horn, in the months of March and April; but the weather there is seldom favourable to the use of boats, and would of course preclude success in carrying on such a business.

On soundings, and in shoal water, attempts have been made to capture a different species of whale, called the humpback (Gibbosa); but there is a great impediment to the securing of the spoils of this game, for when killed they immediately sink for thirty or forty hours. It therefore becomes necessary, either to anchor a boat near by to watch them, or leave a buoy, and then not unfrequently they may be swept off by the under-current, or lost by bad weather.

Although the high latitudes offer great inducements on account of the number and size of the whales, yet there are many difficulties existing, that render it preferable to pursue the game in the low latitudes. The weather, even in the summer season, is often tempestuous, which makes it dangerous to lower boats; and there are, even in the fine season, fogs, which not only tantalize, but prevent the chase from being extended to any distance from the ship, without the risk of losing both boats and crew. I have been told that it has frequently happened that boats have been separated from the ship for several days; thus not only producing great anxiety, but often much distress from want of provisions and water. Our whalers feel that there is quite enough of adventure and peril in following their employment in the lower and less boisterous latitudes.

Notwithstanding these difficulties, the favourite and most successful ground for the right whale, is between the fiftieth and fifty-fifth parallel of north latitude, where vast numbers have been recently taken in June

and July, of great size; although the season is of short duration, yet large ships have obtained a full cargo before its close.

It is impossible to meet a whale-ship on the ocean without being struck by her mere appearance. The vessel under short sail, with look-outs at the masthead, eagerly scanning the wide expanse around them, has a totally different air from those engaged in a regular voyage.

But admiration is excited on becoming a looker-on at the chase and capture. When the cry from aloft of "There she spouts!" and the quick response of "Where away?" are heard, the bustle on the deck shows a state of animation that would scarcely be supposed possible among such a looking set of men. The boats are immediately put in requisition, lowered and manned, and within a few minutes the pursuit is begun. The boats dash on until the boat-steerer comes within sight of his object; the whale is soon reconnoitred, and endeavours are made to approach him unobserved, and plunge the harpoon as near the fin as possible; a wound in this place is sometimes fatal, and no further injury is necessary to secure the animal's capture.

On being struck, the whale at once dives, carrying out the line (which is kept coiled up in tubs) with great velocity, through a notch in the stem of the boat. The velocity of the line is at times so great, that in order to prevent the boat from being set on fire by the friction, water is applied. After the whale dives, some fifteen or twenty minutes pass, during which time the "fast" boat is often carried a great distance from the others, for the whale in descending generally takes an oblique course. The boat is so much buried in her rapid flight, that I have at times only been able to see the persons in her, for the water on each side was thrown so high as to conceal the hull from a distant observer, although the sea was otherwise quite smooth.

As the whale rises, a skilful boat-steerer will be ready at hand, and the moment the animal makes his appearance, lances are plunged in quick succession into his vital parts; when off he again bounds with the life-blood streaming from him, and shortly after, this huge monster is seen to turn over lifeless on his back. The shortness of time that seems to elapse from the first onset to the capture and death of so large an animal, is almost inconceivable; and the apparently insufficient means that are employed to accomplish it, are likewise remarkable.

The whale being slain, signal is made for the ship, if to windward, to come down, or if to leeward, the monster is taken in tow by the boats and brought alongside, when the "fluke hooks" and chains are used to secure him; the operation of baling out the head-matter then begins, which is followed by stripping off the blubber in large pieces, called "blankets," from four to six feet wide, to which tackles are

applied to draw it up as it is separated from the carcass. After being taken on board, the blankets are cut up. The next operation is "trying out:" this is done by melting the blubber in large pots set in a fire-place of brick-work, which is carefully secured on the upper deck, with a trough around it, in which water is put to prevent accidents from fire. The fuel used is blubber from which the oil has been extracted, which produces a strong heat, and is a very economical fire. To prevent accidents great caution is necessary, and the readiest mode that has been found to extinguish the burning oil, is by throwing sand on it; a quantity of sand is, therefore, generally kept in the "try-works." In well-regulated ships, the oil after boiling is put into reservoirs until it cools, after which it is drawn off and placed in the proper casks; of each of these a sample is kept, properly marked and labelled, and these are often shown with much pride by the master of the ship to his visiters, as indication of his success and the quality of his oil.

The profits of the whaling fishery have been great, and show what industry and perseverance can yield when well directed. The small number of accidents in this large fleet is surprising; for the total losses for which underwriters have to pay, seldom exceed one per cent., and those from other accidents are not more than one half per cent. The insurance seldom exceeds two and a half per cent. by the year, and at this low premium the underwriters have derived good dividends.

Of late years there has been much fluctuation in the price of oil, which has caused those to make losing voyages who returned at the times of its depression; but at the steady prices of eighty-five cents per gallon for sperm oil, and thirty-five cents for whale oil, voyages would generally yield a handsome return.

It is estimated that about ten per cent. of the ships make losing voyages, as well from the incompetency of the masters as from accident and ill luck.

The greater proportion of the oil finds a market in Germany, Holland, and Prussia; consequently the prices abroad control those at home.

I have stated the number of sperm whales that are taken at five thousand, and this may in some years be beyond the truth. From the best authorities, the whole of both species annually taken is about ten thousand, including those lost from accident, and those cut adrift, in consequence of bad weather or night. These losses may amount to eight or ten per cent. of those mortally wounded.

It is said that an equal proportion of bull and cow whales are taken.

It is, however, admitted that the latter are the most numerous; and the probable reason for the equality in the number taken may be that the bull whale being the largest, is most sought after. The bull whales yield, on an average, from thirty to one hundred barrels of oil, while the cows seldom exceed forty-five barrels, and at times yield no more than five barrels. Bull whales are never found together, but in small numbers, while the cows are seen in large herds.

The right whale fisheries occupy the higher latitudes in both hemispheres, which are their feeding-grounds. As the winter is setting in, the cows resort to the bays to bring forth their young, where they remain until the spring months, when they again resort to the feeding-grounds, to meet the bulls. It is not known where the latter go during the interval, but it is generally supposed to the high latitudes, where they find their food in greater plenty.

While visiting the ports for the purpose of recruiting, the crews of whale-ships are often found in a state of lax discipline; both captains and crew take this opportunity to lay their complaints before the consuls, who are much troubled with them, and frequently at a loss to understand and pass upon the merits of the case. The crews usually complain of bad provisions, short allowance, and bad usage; in some cases I have heard them assert that they felt their lives in danger from the outrageous conduct of the captain; and in one instance, even the officers joined in the complaint. The captain, on the other hand, believed that there was a conspiracy on foot to poison him.

Many Americans are found on the different islands, who have been turned ashore from whale-ships, or left because they have broken their liberty a single time, near the end of a voyage. Such treatment leaves too much ground to believe that they are purposely left, in order to increase the profits of the ship-master or owners. Several of these men were received, in a perfectly destitute condition, on board the Vincennes; others were taken out of prison, and all related many of the difficulties and troubles they had to encounter on board the ship to which they were attached; although I am not generally disposed to place much reliance on their statements, yet it cannot but happen that out of so many cases there must be some in which the seamen were in the right.

It is difficult to suggest any remedy for this state of things by legislation. The law passed in 1837 has had a beneficial effect in protecting the crews against a short supply of provisions, and in causing them to be furnished with wholesome food. But the quantity as well as the quality of the rations ought to be fixed by law, that every one who is

restricted in food by his commander may receive an equivalent in money.

The ration has been hitherto left to the master and owner, and although it is the true interest of the latter that the crew of his ship should be well fed, yet there are many who think and practise the contrary. I see no reason why there should not be a lawful ration fixed as well in the merchant service as in the navy, and when it is not supplied in full, that the crew shall be entitled to be paid for the deficiency; it then could be no object for a master or owner to stint them. I have generally observed that by far the greater part of the complaints arise from this cause, and when the master is part owner they are almost invariably made.

Another cause of complaint arises from the practice of issuing slops to the crews instead of money, and giving the supply of these to the master as a perquisite. I was not a little surprised when I learned that this perquisite had amounted to eighteen hundred dollars with a crew of about thirty men. It, in fact, sometimes reaches the amount of between two and three thousand dollars; and it will naturally excite some curiosity to know how so large a net gain could accrue from sailors whose ordinary dress is but a pair of coarse blue trousers and red flannel shirt. There is, however, no difficulty in the explanation. The crew, in the first place, get an outfit in clothing as an advance, which is charged to them at a profit of one hundred per cent.; they then when allowed liberty on shore are obliged to draw these goods or clothing, in lieu of money, and cannot exchange them on shore for more than one-fourth of what they are charged for them. In this way a debt is accumulated against the "lay" of the seaman, until he finds before the end of the voyage that the whole amount that ought to accrue to him is dissipated. This naturally leads to discontent against the persons whom he knows or believes to be the authors of his loss, and for whose gain all his labours have gone. This state of things unavoidably produces difficulties, more or less serious according to the number of the crew who find themselves thus circumstanced. I am not prepared to say how this can be avoided, but I am well satisfied it would be for the interest of the owners to reserve this supply to themselves, and charge it to the crew, at such advance on the cost as will just secure themselves from loss. By doing this they would find that the expenses caused by detention and the many vexations and quarrels would be saved. It is inconceivable how much time is lost in port by these difficulties between the master and crew.

Many difficulties would certainly be prevented by the government sending men-of-war to the ports at the time they are frequented by the

whalers, not only to support the authority of the consuls and masters of whalers, but at the same time to protect the interests of the crews. I am well assured that the presence of our national vessels would in a great measure prevent many of the disturbances that are constantly occurring between the masters and crews, among the crews of different vessels, and between both these and the authorities on shore. It is due to the large interest embarked in this extended fishery, that the government should protect its defenceless ships against savage attacks, and have a force at hand to preserve the property in case of accident or wreck. Two of our vessels of war, actively engaged, would suffice to afford ample protection to this business, by being kept cruising so as to reach the various ports at the proper seasons. In this way they might be the means of relieving many of our countrymen from distressing situations, and of restoring them to their homes in safety. A knowledge among the whaling-fleet that their interests were watched over, even if they made no calls for aid, would give security, and protect them from impositions, as well as prevent them from practising fraud, or committing aggressions on the natives of the islands they visit. Such aggressions invariably lead to retaliations on the part of the chiefs, which they inflict upon the first unsuspecting vessel that anchors in their ports. The capture of vessels, and the massacre of their whole crews, have frequently been owing to this cause.

It would also be the means of securing the owners against losses; for it scarcely need be stated, that in the event of accidents, that would be deemed elsewhere of a trivial nature, condemnation frequently ensues, and a total sacrifice of the property. This is not to be ascribed to any want of vigilance, or to connivance on the part of our consuls or the public authorities; but it arises from the desire on the part of whole communities to derive profit out of accident. A visit of a man-of-war, or the feeling that one was or would be at hand to afford succour, and relieve distress, would have a tendency to remove these evils.

The difficulties to which the whaling fleet is exposed are often aggravated by the position of our consuls; for if engaged in trade, as they almost always are, they lose that influence and standing with the authorities, which they otherwise would have, whether civilized or savage, as well as with their own countrymen.

The whole system is wrong: those appointed to such situations should not be suffered to engage in trade, but should receive a salary adequate to their support. This would place them in a situation to assert our rights; prevent the difficulties now of daily occurence; and enable the consuls to maintain the high standing they ought to hold in foreign ports.

The crews of whale-ships are much more prone to scurvy than I had any idea of: during our stay at Oahu, several ships arrived, more or less affected with this horrible disorder, which arose from various causes; my inquiries satisfied me it was in most cases to be imputed to the long period passed at sea, aggravated by the despondency arising from want of success. In one case in particular, the captain had stopped at some islands for fruit and provisions, of which he had received an ample supply, and, concluding that his crew would recover, he continued to cruise until he finally reached Oahu with no more than three men fit for duty. Several of his men had died, and the rest were in a very precarious state. This, in my mind, is a sufficient proof that it is absolutely necessary, not only to give the crew occasional relaxation, but a change of employment, and additional hours of rest; it also shows that fresh provisions are not alone a sufficient preventive against, or cure for the scurvy. A change of diet must be accompanied by a change of scene, and cleanliness. To a strict attention to these circumstances, and care in promoting cheerfulness, I impute the remarkable freedom from disease enjoyed in the squadron during the whole cruise. Feeling constantly that on the health and good condition of my men every thing depended, I lost no opportunity of encouraging amusements, and particularly enjoining attention to their cleanliness.

I would strongly urge upon the owners of whale-ships the necessity of the assignment of a larger and more airy apartment to the crew. The usual accommodation in the forecastle of a ship is in every respect unfitted to preserve either cleanliness or comfort. There is, perhaps, more room for improvement in this respect than in any other that can engage the attention of the owners of ships. While they are lavishing every sort of expense on the cabins and saloons, and receiving the meed of praise from the civilized world for the costliness and beauty of the decorations, I would ask them to bestow some small attention and expenditure to increase the comforts of the common sailor, by whose aid alone their business can be carried on.

Among the masters of whale-ships with whom it has been my good fortune to fall in with, were many intelligent persons, from whom I have derived much pleasure and information in my intercourse with them. As a class, they bear a high character; but there are some, I regret to say, whose actions tend only to bring disgrace on themselves and the pursuit they follow. I shall not dwell upon such a disagreeable topic, trusting that time and good example will meliorate the evil.

There is one entreaty I would urge upon all those who are engaged

in the whale and biche de mar fishery; namely, that in their intercourse with the natives of the South Seas they would treat them with justice and honesty. By so doing, I am satisfied that however much they may be exposed to dangers, they will escape without harm. I would not, however, be understood to say, that they should relax any thing in watchfulness against treachery; but while this is attended to, all harsh treatment to the natives should be avoided.

Above every thing, a strict morality should be preserved on board, both by precept and example, and none should believe themselves beyond the eye of those whose respect they value at home. I am well assured that under such auspices, the arrival of a whale-ship would be hailed with delight in the ports it may visit, instead of being often looked upon as it now is, as a blight upon a dawning civilization. On no consideration should the debt to those pioneers of civilization, the missionaries, be forgotten; for they have already, in very many parts, by their example and instruction, been the means of saving many of our countrymen and shipmates from cruel captivity and horrible death.

Before closing this chapter, I would also say a word to the first planners and promoters of foreign missions in the South Seas, entreating them to turn their attention to the morals of those who follow the sea, and the improvement of their condition. Our ships might, by proper exertions at home, be soon made to carry on every breeze, to the ports and islands of the Pacific, such an example as would promote the great cause of morality, religion, and temperance: of one truth I am satisfied, that if one-tenth of the sums and attention now expended in other ways, were applied to improving the condition of sailors, elevating them in their circumstances, both at sea and on shore, it would produce in a short time the most desirable results; and instead of our "tars" being considered, as they now frequently are, worthless reprobates, opposed to every thing that is sacred, they will be found a band of industrious advocates in the cause of civilization. Until this class of men is brought up to a respectable standing, the cause to which so much exertion has been applied, so much talent and perseverance have been sacrificed, and which now claims so much of the interest and attention of the civilized world, can never permanently prosper.

The field for improvement is wide, and those who first labour in it must reap a most satisfactory harvest. To none does it more appertain to take the first step, and push earnestly onwards, than the owners of our mercantile marine, and of our whaling fleet in particular.

APPENDIX.

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APPENDIX.

I.

U. S. Ship Peacock,
Saluafata Bay,
February 25th, 1841.

Sir,—

You will take charge of the boat expedition against the towns of Saluafata, Fusi, and Salelese.

Your party will be divided into three divisions: you will take charge of the first, accompanied by Lieutenant De Haven; and Lieutenant Emmons, assisted by Passed Midshipman Davis, will take charge of the second division; Lieutenant Perry, assisted by Passed Midshipman Harrison, will take charge of the third division, of reserved men, and remain on the beach, for the preservation of the boats, and to secure your retreat.

You will give the most positive orders not to fire on the natives or destroy life, unless the safety of your own party, or open and hostile resistance on the part of the natives, make it absolutely necessary for the discharge of the duty assigned you.

I trust much to your discretion and prompt attention on the present occasion, and that the men and officers placed under your command may not be subjected to any unnecessary hazard or exposure. With a sincere desire for your safety and success,

I am, &c.,
Wm. L. Hudson,
Commanding U. S. Ship Peacock.

To Lieutenant Wm. M. Walker,
U. S. Ship Peacock.

II.

U. S. Ship Peacock,
Off Apia, February 26th, 1841.

Sir,—

You will take the second cutter, and Passed Midshipman Harrison from this ship, and join the Flying-Fish, which vessel I have placed under your command, for the purpose of securing the chief Pea, and bringing him off from the island of Manono.

I wish you to proceed with all possible despatch to the island of Manono, under the pretence of surveying its reefs and harbours with your boat, leaving the schooner in such a position as you may deem most advisable and circumstances shall suggest, to avoid any suspicion of your designs on the part of the natives.

After reaching the island, you will ascertain the chief Pea's whereabouts, &c., and the most successful manner of getting him off to this ship without injury to any of your own party, or the chief's.

Should your enterprise prove successful, you will return to the ship as soon as possible, passing round the south end of Savaii, and sending your boat to the house of Mr. M'Donald, with the proffer of an asylum to himself and family on board the schooner until you join the Peacock off the northwest end of Savaii, or at the harbour of Mataatau.

It is an important matter that we should secure the chief Pea for the purpose of obtaining the notorious chief Opotuno. You will treat your prisoner with all the kindness consistent with his safe-keeping, should you succeed in capturing him.

The manner of proceeding is confided to your judgment and discretion. Wishing you success in your enterprise,

I am, &c.,

William L. Hudson,
Commanding U. S. Ship Peacock.

Lieutenant George F. Emmons,
U. S. Ship Peacock.

P. S. Should Mr. M'Donald deem it necessary to embark on board the schooner (to whom you can confidentially say we have Pea, and intend to demand Opotuno), he must do it without delay, and direct his canoe to follow on to the Peacock.

W. L. H.

U. S. Ship Peacock,
Off Upolu, February 27th, 1841.

Sir,—

You will take charge of two boats from this ship, accompanied by

Lieutenant De Haven, for the purpose of securing and bringing off the chief Malietoa, and if practicable the chief George from Cocoa-nut Point. Malietoa, however, being the most important personage to us at the present time, must be first arrested. You will be careful not to capture the chiefs until such a time as the tide may serve for getting your boats over the reef.

In making prisoners of these chiefs, you will avoid any hostile act upon the natives, beyond what the most urgent necessity of the duty assigned you calls for, and endeavour to get them off without injury to them or any of your own party.

Your manner of proceeding on shore should be such as to avoid the least suspicion of your object, and the capture so well-timed as to avoid either hazard or defeat. No special or positive directions can be furnished by me for your guidance; you will act as circumstances may suggest; consequently your manner of proceeding on shore is confided to your own judgment and discretion.

Should your enterprise prove successful, you will treat the chiefs with all the kindness consistent with their safe-keeping, and return to this ship with the least possible delay.

The Peacock will be kept in the offing, and lights shown during the night.

Wishing you all success,

I am, &c.,

WILLIAM L. HUDSON,
Commanding U. S. Ship Peacock.

LIEUTENANT WM. M. WALKER,
U. S. Ship Peacock.

U. S. Ship Peacock.
March 1st, 1841.

SIR,—

In pursuance of your instructions, I landed at the town of Malietoa, on the evening of the 28th inst., supposing that a movement apparently so undisguised, would lull every suspicion of our intentions.

At 10 P. M. we made every preparation to complete the execution of your orders, and a dark and rainy night flattered us with a prospect of success; but on landing to reconnoitre, I was met at the water's edge by a large party of armed men. I passed them without any notice, and under the pretence of seeking a bed in the house adjoining that of Malietoa's, where I had slept on a former visit, discovered that it was filled with men on guard, their arms within grasp standing around. These circumstances sufficiently declared the appre-

hensions of the people, and the madness of any hostile movement with so small a party as that under my command (twelve men). Trusting that an easy and confident deportment on my part would allay their fears, I passed a watchword to the boats, and lay down to sleep.

On the next morning, observing that a large number of men had left the town, we again confidently contemplated the success of our enterprise. With the ostensible purpose of taking leave, but with the design of attempting to carry him off, Lieutenant De Haven and myself called to see Malietoa; when, to our surprise, we learned that after holding a council he had left the town at an early hour.

We immediately proceeded to the west side of Cocoa-nut Point, whence I despatched M'Gill to ascertain, if possible, the whereabouts of George Tongaloa, in which he did not succeed.

At Apia, I learned that the chief Sangapolutale had been last seen at the town of Saluafata, on the morning of the day on which it was burnt.

Amid the vexation of disappointment, I have the satisfaction to believe that our conduct afforded no reason to suspect our purpose.

With great respect,

I am, &c.,

WILLIAM M. WALKER,
Lieutenant.

CAPTAIN WM. L. HUDSON,
U. S. Ship Peacock.

U. S. Ship Peacock,
At Sea, March 6th, 1841.

SIR,—

Agreeably to your instructions of the 26th of February, I proceeded with the schooner Flying-Fish, and this ship's second cutter, off the island of Manono. The weather being unfavourable, laid off and on the first night; the following morning ran into a bight, formed by the reef uniting Manono and Upolu, and anchored on broken bottom, sheltered from all but northerly winds. This day being Saturday, and consequently, the natives' Sunday, was unfavourable for the execution of my plans in capturing the chief Pea, but allowed me an opportunity of disguising my intentions, by going through the usual routine of surveying, sounding, &c., which I continued employed at most of the day, landing occasionally on points of the island, to measure angles. Upon these occasions, the natives crowded around, and asked many unusual questions; and from their general manner, I could see that they were very suspicious, and considerably alarmed, which

I was unable to account for, till towards evening, when I learned from Passed Midshipman Reynolds (whom I had landed on the island during the forenoon, unarmed, for the purpose of making some arrangements for trading with them, on the following day, for pigs, yams, &c., and at the same time to obtain such information in regard to said chiefs, as would be actually necessary to the success of my plans) that the news of our cruising, together with the object we had finally in view, had preceded us four days, with the additional embellishment that the ship was to follow us and destroy the island.

This was voluntarily told to Mr. Reynolds by a Mr. Heath, the only foreign missionary upon the island, who asked Mr. Reynolds if he would authorize him to contradict the report, and thereby quiet the apprehensions of the natives, who were very much alarmed, and continually coming to him to learn the truth.

This unfortunate rumour knocked all my plans in the head, and left me but little hopes of future success. I, however, came to the conclusion that if the said chief still remained upon the island, that the only other plausible plan for getting possession of him would be by taking him forcibly from his house during the night, or from the beach while employed trading during the day; and to this end I had the schooner removed the following day to the opposite side of the island, and sounded out a passage in the reef leading to her from abreast Pea's house.

At a suitable time, I landed with Passed Midshipman Harrison and a boat's crew near his house, and commenced trafficking, the natives gathering about in great numbers, and appearing less suspicious than upon the day previous, yet many of them with their arms. Having spent much of the day in this manner, without seeing any thing of said chief, although many others were present, I left Mr. Harrison to trade, while I strolled about the island.

Having visited the most probable places for meeting with him, I at last went to his house, which contained nothing but women and children; and from information subsequently obtained from a coloured man (who had lived eight years on the island with a chief by the name of Matetau), convinced me that Pea left the island soon after our heaving in sight; but in what direction he had gone I was unable to learn. This putting an end to my last hope, I returned to the schooner, and commenced working to the northward, to meet the ship at the appointed rendezvous.

On the morning of the 1st of March launched a boat to examine what appeared to be a ship passage leading through the sea-reef around Savaii: it proved to be a boat passage only.

Landed at a missionary's house, and was informed by the missionary (Mr. Hardy) that the chief Pea had landed upon Savaii, several miles from his house, about the time I appeared off Manono.

The news of our affair at Saluafata was known here soon after it took place, which shows how fast information travels among these people, and will in a measure account for the unfavourable result of my cruise.

During this day it came on to blow a gale from the northward; got the second cutter on board, and laid to, under snug sail, for the following days, drifting to the northward and eastward.

March 3d. Gale abating; stood for the northeast end of Savaii, and during the 4th and 5th, was employed cruising the island around, sometimes so close as to make it necessary to sweep the schooner off, without finding any harbours. However, being off a place called Salelonga, on the southeast end of Savaii, where there is a harbour reported to exist by the missionaries, I pulled in to examine for the same, and after sounding out the various passages leading into the reef, found but two deep enough to admit a ship, and these so crooked and narrow as to make it impracticable to enter otherwise than by warping, and the space inside too small to allow a ship to swing, with a safe scope, at her anchor. Anchorage can, however, be obtained on sandy bottom in from ten to eighteen fathoms water, close to the outer entrance, in a comparatively sheltered berth, owing to the proximity of Upolu, Manono, Apolima, and their surrounding reefs.

Very respectfully,

GEORGE F. EMMONS,
Lieutenant.

CAPTAIN WM. L. HUDSON,
U. S. Ship Peacock.

III.

U. S. Ship Peacock,
Drummond's Island,
April 9th, 1841.

SIR,—

You will take charge of the boat expedition against the town of Utiroa, where John Anderson has been seized and detained by the natives. Your party will be formed into three divisions. Lieutenant Emmons, assisted by Passed Midshipman Harrison, will take charge of the first division; Lieutenant Perry, assisted by Passed Midshipman Davis, will take charge of the second; and Lieutenant De Haven, assisted by Mr. Freeman (sail-maker), will take charge of the third

division of reserved men, and remain near the beach for the protection of the boats, and to secure your retreat. You will give the most positive orders to the men not to separate for a moment from their respective officers and divisions.

A quantity of tobacco will be furnished you by Purser Speiden for the release of Anderson, in the event of his being given up conditionally by the natives. Should a demand be made by the natives for his release, you will comply with it, using great precaution in so doing to secure the man; after which you will land, and burn the large town-house only, and return to the ship. Should you meet him being brought off in a canoe, with the stipulations above referred to, you will reward the persons bringing him off, and return to the ship without landing. Should Anderson, however, not be forthcoming soon after reaching the town, you will fire it, being careful not to pass its boundaries to the injury of any other village.

It is hardly necessary to say to you that women and children can have taken no part in the seizure of Anderson; and should the men of the town retreat before you, you will recollect it may arise from two causes: one may be fear, the other to decoy you into pursuit, where they may be prepared with a reinforcement. In either case, you will not follow them beyond the limits of the town; but as soon as the work of destruction is completed, embark to the schooner with your party, direct Mr. Knox to get under way, and run out to the anchorage near the ship. If there is no wind, let your boats take him in tow.

I trust much to your discretion and prompt action on the present occasion, and that the officers and men placed under your command may not be subjected to any unnecessary hazard or exposure.

With a sincere desire that Anderson, if living, may be obtained, and for the safety and success of your party,

I am, &c.,

WM. L. HUDSON,
Commanding U. S. Ship Peacock.

To LIEUTENANT WM. M. WALKER,
U. S. Ship Peacock.

U. S. Ship Peacock,
Off Drummond's Island,
April 9th, 1841.

SIR,—

In obedience to your order, I proceeded this morning with the boats under my command to the town of Utiroa, where the natives armed and equipped to the number of about six hundred, in three divisions,

their flanks extending to the right and left about two hundred yards; large parties were at the same time approaching along the shores. After forming the boats in the order of landing, at the distance of about eighty yards from the beach, I advanced, and was met by a similar movement on the part of the natives. By means of Mr. Hale I inquired for Anderson, and offered a reward for his delivery; but the natives returned evasive replies, and continued to approach from different parts of the shore with the evident design of seizing my boat. I therefore returned to my station in the line, when I directed the gunner to let off a rocket, which fell in the midst of a group and created some astonishment. I next fired a single shot, in hopes, by exhibiting the effect, much loss of life might be prevented; but the natives retired so slowly, that it became necessary to fire a volley, by which several were killed, and many wounded.

The natives then retired to the cover of the town; when we immediately landed and formed, leaving the third division to protect the boats. I proceeded with the first and second divisions to fire the town in all directions; occasionally discharging a single shot at the natives, who slowly retired before us.

Just before our return to the boats, the chief of Eta, the town to the northward of Utiroa, came to us with expressions of much satisfaction at our conduct, while his attendants busied themselves in pillaging the burning ruins.

By the best estimate I can make, the natives lost twelve men; there was no means of computing the number of wounded; about three hundred houses were burned, and many canoes were destroyed.

I am indebted for this summary execution of your orders to the zeal and energy of the officers and men whom I had the honour to command.

Very respectfully,

WILLIAM M. WALKER,
Lieutenant.

CAPTAIN WM. L. HUDSON,
U. S. Ship Peacock.

IV.

(Confidential.)

U. S. Ship Vincennes,
June 15th, 1841.

SIR,—

You are intrusted with the charge of the party consisting of Messrs. Peale, Rich, Agate, and Dr. Whittle, together with the necessary servants.

Mr. Rodgers will also accompany you, as interpreter, caterer, &c.; he having been engaged by me for that purpose, for the explanation of the district pointed out to you on the accompanying map.

Your arrangements will be completed as early as possible, and you will be careful that the organization of your party is complete, and that they maintain a due obedience to your orders and authority during this service, for on it will depend their safety.

I cannot too strongly impress upon you the necessity of constant watchfulness and caution, in the steps you will pursue, and of acquiring the information necessary to enable you to judge for yourself.

It is desirable to avoid all collision with the Indians, if possible, without, however, showing them that you do so; and if unavoidably attacked, you must not only repulse them, but punish them, as far as may lay in your power, exercising due discretion.

The men whom Mr. Rodgers is to engage at the Willamette settlement, will require of you particular attention. You will know their terms of engagement: for the performance of which, and their good behaviour, their pay will be made answerable.

You will observe strictly the following instructions:

1st. The route I have pointed out to you is believed to be feasible, but as the country is unknown, it may not be so. You are not at liberty to depart from it, however, without good and sufficient reasons.

You will, however, particularly note: my object is to get all the information respecting the district I have marked in red, and you will endeavour to get this as accurate as possible, by travelling over as much of its surface as your time will admit of.

2d. Your absence is limited to the 10th of September, and I am convinced that much knowledge may be gained of the district pointed out to your party in that time.

3d. Observations for latitude and longitude wherever you may encamp.

4th. You will keep an accurate map of your route, noting on it all lakes, rivers, plains, mountains, and every thing worthy of notice, to illustrate its features. For this purpose, furnish yourself with a blank-book of foolscap size, and use each leaf for a day's work; the ruled places will answer the purpose of a scale, and be sufficiently large to insert every thing desirable to note.

5th. You will be furnished with a pocket chronometer, sextant, artificial horizon, prismatic compass, barometer, thermometers, Nautical Almanac, and Book of Tables, which will enable you to obtain all kinds of observations; and I shall expect you to be very particular

and untiring in their use. Much of the information desired will depend upon their use, and will demand your exertions and diligence.

Observations will be obtained daily, if possible, both for latitude and longitude.

The meridian altitude of the sun, by the artificial horizon, you will observe daily if possible, also that of the north star; this observation you will find easy after a little practice, by bringing the two reflected images to cover each other. It is necessary to get the error of your watch in mean time by a star, east or west, to find the true time.

This can be done immediately before or after the observation by the north star, and be better than to depend upon the rate of your chronometer, which may alter in riding, though it is not probable it will much. It must be carried in the chronometer-fob of your waistcoat, which some of you may have near the arm. The best mode of observing a star in the artificial horizon, is to clamp your index and wait its contact. Choose for time those that are east or west, and of altitude about 30°. If you observe about the same hour every night, you will find the computation more convenient.

All your observations must be worked up as soon as possible after they are taken.

6th. Your route or travel must be kept by compass: this you will find without difficulty in an open country, but through the woods it will be better that each of your party be required to keep his reckoning, by which you can correct your own.

The longitude of Fort Vancouver is 122° 39′ 34″ W., and its latitude is 45° 36′ 53″ N., from which you will take your departure.

7th. To obtain the distance of remote objects, base-lines may be measured on the plains. For this purpose the steppings of a horse will give the best results, by first measuring his steps in one hundred or five hundred feet, and at the ends observe the angles and bearings.

8th. A tape-line is furnished you for getting the measurement of trees, short bases, &c., and any remarkable object you may meet with. Attend to the velocity of rivers by the distance that a chip will pass in any given number of seconds by your watch, and the ratio of a log-line may be adopted.

9th. At all your encampments you will get readings of your barometer, and the thermometer will be taken every six hours, and as often also as any change of altitude or temperature may require.

If by any accident your barometer should be broken on the heights, try the temperature at which water boils.

It is required of you to obtain the heights of all mountain ranges and

peaks, and the geographical position of those which have well-defined peaks.

I need not inform you that sketches from the tops of high hills, with good bearings, will go far to illustrate the country through which you pass; the delay of a day for this purpose will be amply repaid by the information obtained.

10th. It may be desirable for the scientific gentlemen to make occasional short excursions from your direct route. You will in that case afford all facilities in your power to prosecute their researches.

11th. The information also expected from your party, will be names of tribes, numbers, manners, customs, mode of living, habits, character, disposition, and incidents that may occur to the party, as also the timber, kinds and quality, soils, climate, &c. And if you meet with any settlers, note their condition, whence from, &c.

12th. Should you visit any of the forts or stations of the Honourable Hudson Bay Company, you will procure every information relative to them, together with that of any missionaries, and Indian superstitions, tales of adventures, and history, that may be well authenticated. The notes and journals should be full, and so as to be well understood by others without the necessity of explanation; also a regular system of writing them up before going to rest.

13th. Keep your party always armed, night and day; this must never be omitted; a dog or two in your camp, besides the usual watch, would be advisable.

All the gentlemen of your party will take turns in watching, and the others also divided according to their numbers.

14th. You will study the safety as well as comfort of your party, and will bear in mind particularly the instructions for the intercourse with natives in my General Order of the 1st of May last.

The route to be pursued by the party, is up the Willamette Valley in a southerly direction, crossing the Umpqua river and mountains, thence south and west of the Shaste Mountains to latitude 42° N.

Very respectfully, your obedient servant,

(Signed) CHARLES WILKES,
Commanding Exploring Expedition.

To LIEUTENANT GEORGE F. EMMONS,
U. S. Ship Peacock.

U. S. Brig Porpoise,
Columbia River, Sept. 1st, 1841.

SIR,—

As additional orders to those of the 15th June, you will observe the following, viz.:

Passed Midshipmen Eld and Colvocoressis, Messrs. Dana and Brackenridge, Sergeant Stearns, and Henry Waltham, an ordinary seaman, are added to your party.

You will leave your encampment in the Willamette at the earliest possible hour.

Your route from thence will be through the Willamette Valley, south towards California, and if possible west of the Shaste Mountains, thence to strike the waters of the Sacramento, passing over the head waters of various streams that empty into the ocean, viz., the Umpqua, Klamet, and their branches.

Your party is now composed of twenty officers and men: the addition of five or six more good and trusty men, will, I think, be amply sufficient to insure your safety, and enable you to proceed with all despatch: any more than is necessary to insure safety, I view as likely to retard your progress.

After you start, which must not be later than the 5th or 6th, I give you twenty-five days to reach the forks of the Sacramento, where the boats of the Vincennes or squadron will be on the 30th of September.

If you should fall upon the Sacramento, taking a more easterly route, you will, if you find it difficult to proceed with your horses, abandon them, and proceed in canoes down the river.

It is possible you may have to construct them; and rough ones will answer your purpose for navigating the river to its mouth, where you will find the Vincennes at anchor.

In conversation, I have impressed upon you the necessity of not losing time, and bear in mind that in order to gain this desirable end, it will be necessary for you to press your party all you can. The saving of a few horses must not impede your advance, particularly after you have passed the hostile Indians.

I desire that you will endeavour to reach your destination in the time specified, as it may save the party sent to meet you, and the service, much delay.

The route you will probably follow, is that usually taken by the Company's party; but in your advance, when it is safe, it may be desirable for a part to deviate, for the purpose of gaining information.

Although your orders are marked "confidential," you will show them to Passed Midshipmen Eld and Colvocoressis, that they may be aware of the duties to be performed in case of accident to you. And no important hostile step will be taken unless through a council, in which all the gentlemen accompanying you will join; and you will be particularly careful that no act of aggrievance by your party should bring about such an event.

I again refer you to my General Order of the 1st of May last, in relation to intercourse with Indians,

And am, very respectfully,

Your obedient servant,

(Signed) CHARLES WILKES,

Commanding Exploring Expedition.

P. S. I have placed a magnetic apparatus and needle in charge of Mr. Eld, with which he will make observations every fifty or sixty miles on your route.

You will give Mr. Rodgers an order on me for the amount due him, and inform him that his services are no longer required by you.

I am, respectfully, &c.,

(Signed) CHARLES WILKES,

Commanding Exploring Expedition.

LIEUTENANT G. F. EMMONS,
U. S. Navy.

V.

U. S. Brig Porpoise,
Columbia River, Oct. 2d, 1841.

DEAR SIR,—

Being obliged from the lateness of the season to abandon the intention I had of using the launch of the late United States ship Peacock for the exploration of the coast to the southward of this river, I have thought that I could not possibly place her to a better use than by leaving her as a pilot-boat for communication with vessels off the dangerous bar of this river, and to afford relief, by giving pilots and assistance to those that are coming in, or in cases of accident.

It was my intention to have spoken to you on the subject before I left Vancouver; but, among the many duties that occupied my attention, it was forgotten.

I have spoken to Mr. Burnie in relation to taking the launch in charge for that purpose, but he has referred me to you, as he did not feel authorized to assume the responsibility of acting for the Company.

I will now state in a few words the charge I wish the Honourable Hudson Bay Company to assume, viz.:

That the launch be kept at Fort George, under the special charge of the agent of the Hudson Bay Company, for the sole purpose of affording aid and relief to all vessels requiring assistance of any kind, and to furnish pilots for entering the river, until called for by some

person authorized by me or the government of the United States, to receive her.

In making this request, I am well aware of the desire the Honourable Hudson Bay Company and its officers have always shown to do every thing in their power to afford relief to those in distress, and the deep feeling all attached to this squadron have evinced for the relief extended to ourselves individually, during the late disaster; and it will only be placing a suitable boat in the hands of the Company, in which to afford relief more promptly. I therefore have little doubt but that you will not object to assume the charge, and I assure you it will afford me great satisfaction hereafter, to hear that she has been of any use in saving lives or property.

The launch will be left with Mr. Burnie, with all her fixtures complete.

I am, with much respect,

Yours, &c.,

CHARLES WILKES,

Commanding Exploring Expedition.

To JOHN M'LAUGHLIN, Esq.,
Chief Factor, H. B. C. Fort Vancouver.

VI.

U. S. Brig Porpoise,
Columbia River,
August 7th, 1841.

SIR,—

You are transferred to the Vincennes, now laying off and on the river, in order to carry her to the bay of San Francisco; and you will, without delay, proceed to that port, and report your arrival duly to the Commandant of the Presidio as coming for the purpose of refreshing the crew, and to await my arrival with the rest of the squadron.

After this ceremony is performed, you will proceed with the ship to anchor near the island of Molate, in the northern branch of the bay; when you will safely moor the Vincennes, leaving her in charge of Lieutenant Carr, with one other lieutenant, Passed Midshipman Davis, and three midshipmen, and proceed with six boats, including your own, to examine the river Sacramento and its branches. This you will do by running to its head waters, or as far as it is practicable to pursue the river with a boat, and then bring the survey down from the extreme point arrived at, where your latitude and longitude must be carefully determined. This it is believed will be on the head

waters, called on the map "Pitt River." From this position and others you will get a view of the different mountains, particularly the Shaste Peak, the most southern one in the territory of Oregon.

Your attention, besides being directed to the rivers, will embrace as much of the surrounding country as possible, in order to afford the fullest information relative thereto, including soil, timber, &c.

On your arrival at the anchorage off Molate, you will select a place, with Lieutenant Carr, for the observatory; and he will superintend the landing and putting up of the transit for observations of moon culminating stars, and the rating of the chronometers. The magnetic instrument of Gauss, and likewise the meteorological instruments, will be put up, that the usual and regular observations may go forward.

The preserved meats and cranberries on board the Vincennes are not to be used except for the sick, and no grog is to be served to the crews of boats on surveying duty; but they must be regularly supplied with their rations.

The crews of boats on surveying excursions will have their allowance of beef and pork increased one-half.

The five boats that accompany you will be placed under charge of Lieutenants Alden and Budd, Passed Midshipman Sandford, and Midshipmen Hammersly and Elliott; and the launch, under charge of Mr. Williamson, will also be taken to carry provisions and tents.

Observations for chronometers and equal altitudes will be taken the day of your arrival, if possible, together with circummeridian observations, and transit bearings obtained, to ascertain the accuracy of Beechey's survey, which you will apply to his chart, if two or three can be obtained at or near the same spot (by looking at the chart several meet my eye near the island of Los Alcatrazes, with it and the surrounding points and headlands); and it would be well to send an officer (Mr. Totten) there to obtain a round of angles, and at the same time get observations for time.

Dr. Pickering will accompany the expedition of boats, and Lieutenant Case, Acting Master Totten, and Passed Midshipman May, be employed plotting.

I enclose a memorandum for Lieutenant Carr, which you will hand to him when you leave the ship.

I am, &c.,

CHARLES WILKES,
Commanding Exploring Expedition.

LIEUT. COM. C. RINGGOLD,
U. S. Brig Porpoise.

VII.

OFFICIAL STATEMENT OF THE POPULATION OF UPPER CALIFORNIA RESIDENT IN EACH MISSION, IN 1828, AS MADE BY THE MISSIONARIES.

MISSIONS.	Priests.	Men.	Women.	Boys.	Girls.	Total.
JURISDICTION OF SAN FRANCISCO.						
Presidio de San Francisco . . .		124	85	89	73	371
Pueblo de San Jose		166	145	103	110	524
Mission of San Francisco Solano .	1	285	242	88	90	705
" de Rafael	1	406	410	105	106	1,027
" San Francisco	1	146	65	13	13	236
" Santa Clara	2	752	491	68	60	1,371
" San Jose	1	823	659	100	145	1,767
" Santa Cruz	2	222	94	30	20	366
JURISDICTION OF MONTEREY.						
Presidio de Monterey		311	190	110	97	708
Villa de Brancaforte		52	34	27	17	130
Mission of San Juan Baptista . .	1	480	351	85	71	987
" San Carlos	2	102	79	34	21	236
" de la Soledad	1	210	81	23	20	333
" San Antonio	1	394	209	51	17	711
" San Miguel	1	349	292	46	61	748
" San Luis		211	103	8	7	329
JURISDICTION OF SANTA BARBARA.						
Presidio de Santa Barbara . . .		167	120	162	164	613
Mission of la Purissima		151	218	47	34	450
" Santa Inez	1	142	136	82	96	456
" Santa Barbara	2	374	267	51	70	762
" San Buena Ventura . .	2	389	283	66	59	791
" San Fernando	1	249	226	177	181	833
JURISDICTION OF SAN DIEGO.						
Pueblo de la Reyna de los Angelos		562	421	213	202	1,388
Presidio de San Diego		295	109	115	89	608
Mission San Gabriel	2	574	472	171	171	1,388
" San Juan Capista . . .	2	464	346	69	70	947
" San Luis Rey	2	1,138	984	328	288	2,788
" San Diego	2	750	520	162	146	1,578
Total	28	10,312	7,632	2,623	2,538	23,105

NOTE.—Of the 23,105 inhabitants exhibited by this statement, 4342 are people of character (gente de rason), distributed among the following places:—Presidio of San Francisco, 371; town of San Jose of Guadaloupe, 524; presidio of Monterey, 708; villa of Brancaforte, 30; presidio of Santa Barbara, 613; town of Reyna de los Angelos, 1,388; presidio of San Diego, 608: the remaining 18,763 are neophytes.

In the year 1840, the returns for the mission of Santa Clara, which mission was established in 1771, gave 86 baptisms, of whom 56 were white, and 30 neophytes. Marriages were but 10, 5 of each; and deaths 97, of whom 24 were whites, and 73 natives. Since the foundation of the mission there have been 10,083 baptisms, 2,750 marriages, and 7,571 deaths.

VIII.

U. S. Ship Vincennes,
Honolulu, Nov. 23d, 1841.

Sir,—

I have the honour to acknowledge the receipt of your communication of this date, respecting a man belonging to this ship, by the name of Lewis Herron. In replying to it, I would in the first place make known to you the desire I have always evinced, and still do, to cause all under my command to respect the laws of the Islands, and to suffer the penalties when infringed, provided a proper trial has been had. Such not having been the case in the present instance, in my opinion, I deemed it a duty I owe to those under my command, and all other American citizens, as well as to your government, to interpose, and prevent punishments being inflicted.

The case as I view it is this, viz.: Lewis Herron, during his liberty on shore, quietly desires to enter a public house, and is met at the door by a man with a cutlass, who refuses him admittance, and after a little altercation, he is assaulted and wounded in the leg with the cutlass. This excites his passion, (as well it might,) and he takes the weapon from the aggressor and inflicts several blows on him with its flat side; finds himself attacked by several; inflicts a wound, and is found in possession of the weapon by the police; he is apprehended and taken to the fort.

The next day he is brought before you; you hold an examination, without the formality of a trial, receive testimony (not on oath), and pass sentence on him, unknown to any one, to receive one hundred lashes, and pay a fine of fifty dollars.

Application is made to you by my order, for a trial by jury, which I was informed you engaged to give the next morning; to my great surprise, the first news I learn is, that you have inflicted twenty-eight lashes at eight o'clock, and intend to subject him to seventy-two more, and a fine of fifty dollars.

Now it strikes me, that the magnitude of the punishment presented by the laws ought to have caused you to order a trial by jury, which, according to treaty, is fully acknowledged, and then the person would have had full opportunity for a fair and impartial trial.

It appears most clearly to my mind, that you lost sight of the distinction of using weapons to assault and with criminal intention, and their accidental use in defence, or from provocation.

It appears to be very clear that you were of opinion that he did

not carry them, had not brought them, or was guilty of a breach of the first part of the law, viz., carrying unlawful weapons, for you sentenced another who made the first attack upon him; and equally clear that he did not inflict any wound until he was assaulted by several, and in self-defence, and had received great provocation to use the weapon he had taken from the man who attacked him. This might have occurred to any one walking peaceably in the street, and yet you adjudge him guilty of the worst motives, in having in his possession the weapon, and order him to receive, after a very informal hearing, the severest penalty of the law; and that too, after his trial had been demanded by jury, and you had been understood to grant the request. Is this right? I think not. Under these circumstances, I felt it my duty to interpose, and protect him from a farther infliction of lashes, which you now inform me is remitted; but that his fine is still to be paid.

In demanding the man, I would have you distinctly to understand, that it is not my desire to screen him from proper or legal punishment, provided he is found guilty of an offence by a tribunal invested with power to try the case; but I object to any informal proceedings, particularly where an ignominious and severe punishment is to be inflicted.

The case, as I now view it, stands thus: the man has received twenty-eight lashes by your authority, and is required to pay fifty dollars, without being allowed a proper trial, or such as he was justly entitled to, and was claimed for him, and at which testimony would have been brought to show that he was, prior to, and at the time of entering the premises, peaceably inclined, with no weapons on him; when he was assaulted by one carrying unlawful weapons, and resents it; unfortunately proves the most powerful, and gets possession of the weapon; is attacked by others, whom he defends himself against, and is then taken and punished, without an opportunity of bringing proof of his good character, which there are many to vouch for; and suffers part of a punishment that would be inflicted on an assassin.

The punishment already inflicted prevents me from soliciting a new trial; but I do, and must claim that a further hearing be had, in the same informal manner, to examine if his intentions were criminal, by making an unprovoked attack on the persons, and not one of self-defence, and under the circumstances excusable, before I can consent to the payment of a fine, which I cannot but view as excessive.

In being brought to this conclusion, I must again impress upon you, that it will always be my desire to show the utmost deference to your laws, and to cause them to be observed by all those under my

command, and that I disclaim all intention of interfering with their execution; but while I make this avowal, I must at the same time, as I feel myself in duty bound, state, that I object to any informal or arbitrary punishment being inflicted upon any under my command, without the due observance of the forms provided for by treaty stipulations.

I am, &c.,

CHARLES WILKES,
Commanding Exploring Expedition.

To GOVERNOR KEKUANAOA,
Oahu.

IX.

IMPORTS INTO THE HAWAIIAN ISLANDS.

FROM WHENCE IMPORTED, VALUE, ETC.

YEAR.	United States.*	Coast of California, and islands adjacent.†	Chili.‡	Mexico.‖	China.§	Islands of Ascension and Tahiti, and Southern Islands.¶	Norfolk Sound, Columbia River, and N. W. Coast.**	England.††	Prussia.‡‡	Manilla.‖‖	Total.
1836	$151,000	$73,900	$29,000	$36,600	$70,000	$21,500	$21,000	$10,000			$413,000
1837	170,000	49,500	23,000	29,000	47,000	10,800	8,000	8,000	$5,000		350,500
1838	73,000	61,900	10,000	20,000	30,000	1,500	5,000	5,600			207,000
1839	231,000	26,500	31,000	42,000	31,000		5,000	10,000	2,000		378,500
1840 up to Aug. 17th, 1841.	310,000	59,700	67,000	40,000	55,000	6,500	16,000	94,000		$15,000	663,200
Total for 5 years,	$935,000	$270,500	$160,000	$167,600	$233,000	$39,300	$55,000	$127,600	$7,000	$15,000	$2,012,200

REMARKS.—In the imports is included such merchandise only as has been actually landed. No account has been made of that which has been brought for other markets, and not landed.

* Consisting of cotton cloths, bleached, unbleached, and blue; prints, chintz, hardware, copper, cordage, canvass, naval stores, flour, bread, wines and spirits, furniture, soap, iron, paints, &c.

† Sea-otter skins, land furs, bullock hides, soap, horses, &c.; but principally otter skins and bullock hides. This also includes the skins taken near the coast, by vessels fitted out at Honolulu for the purpose.

‡ Same articles as those from the United States.

‖ Principally specie and bullion.

§ Blue Nankins, blue cottons, teas, silks, and some English goods.

¶ Turtle-shell, oil, pearls, and pearl-shell, sugar, &c.

** Lumber, spars, salmon, &c.

†† Long cloths, chintz and prints, hardware, spirits, &c.

‡‡ Cotton goods, broadcloths, gin, &c.

‖‖ The manufactures of China, England, and the United States, and cigars, rope, hats, &c., of Manilla.

IX.—Continued.

EXPORTS FROM THE HAWAIIAN ISLANDS.

NATIVE PRODUCE, AND VALUE.

YEAR.	Sandal-wood, $7 per picul.	Bullock-hides, $2 each.	Goat-skins, 23 cents each.	Salt. $1 25 per barrel.	Leaf To-bacco, 15 cts. per pound.	Sugar. Per pound.	Molasses and Syrup. Per gallon.	Tutui Oil.*	Sperm Oil. Vessel fit-ted out from Oahu.	Sundries.†	Arrowroot. Value 5 cts. per pound.	Total value of native produce ex-ported.
1836	$26,000	$12,000	$4,600	$4,400	$500			$400		$25,000	$300	$73,200
1837	12,000	13,000	4,500	2,700	300	300	1,000 at 37 cts.	600		45,000	200	79,600
1838	6,000	10,000	3,000	1,400		6,200 at 7 cts.	3,450 at 30 cts.	500		35,000	300	65,850
1839	21,000	6,000	1,000	2,900		6,000 at 6 cts.	3,000 at 25 cts.	500	$4,000	50,000		94,400
1840 up to Aug. 17th, 1841.		48,500	14,140	4,500	600	78,000 at 5 cts.	13,300 at 23 cts.	1,000	9,900	85,700	5,020	175,250
Total for 5 years	$65,000	$89,500	$27,240	$15,900	1,400	$34,984	$16,130	$3,000	$13,900	$240,700	$5,820	$488,300

* Tutui oil is a paint oil, made from the candle-nut.

† The above includes fresh and salt provisions, and vegetables sold to the whaling and other vessels, also mustard-seed, brooms, corn, horns, &c.

N. B.—Bills of exchange, drawn by the governors of the Russian colonies on the imperial government, and by masters of ships on their owners, afford the means of remitting a large amount annually to the United States, China, &c.

It is estimated that about one-half of the imports of Honolulu are purchased by traders, and exported to the coast of California, Russian settlements, southern islands, &c.; the other half is supposed to be consumed in the islands.

There is owned in the Hawaiian Islands about 1,500 tons of shipping: of these the Americans own more than half, comprised in seven vessels, and valued at $40,000, the English about one-third, and the natives the remainder; the whole valued at about $60,000.

IX.—Continued.

STATISTICS OF SCHOOLS.

STATIONS.	SCHOOLS.	TEACHERS.	SCHOLARS.	READERS.	WRITERS.	ARITHMETIC.	GEOGRAPHY.
HAWAII.							
Hilo	60	120	2,500				
Waimea . . .	22	22	1,000	560	250	560	100
Kohala . . .	32	59	1,100	302	85	223	
Kailua . . .	16	26	1,070	296	55	269	55
Kealakekua .	34	34	1,837	522	80	356	50
MAUI.							
Hana	29	29	1,477	523			
Wailuku . .	39	60	2,214	750		604	
Lahaina . . .	16	35	1,120	584	156	363	209
Kuanapali . .	6	6	274				
MOLOKAI . .	9	10	1,030	372	27	148	55
OAHU.							
Kaneohe . .	9	9	300				
Honolulu I. .	13	15	859	327	60	235	124
" II. .	4	9	470	200			
Ewa	16	13	550				
Waialua . .	13	14	757	339	145	257	67
KAUAI.							
Waioli . . .	14	18	467	200	53	178	44
Lihue . . .	6	6	281	138			
Koloa . . .	4	5	226	93	50	51	
Waimea . .	15	15	502	308	200	300	85
Total . .	357	505	18,034	5,514	961	3,546	789

X.

U. S. Ship Vincennes,
At Sea, Nov. 28th, 1841.

Sir,—

You are about to explore the range of islands and shoals to the northward and westward of the Sandwich Islands, in company with the Oregon.

This finished, you will proceed towards the coast of Japan, through the usual cruising-ground of our whalers.

Your route is particularly pointed out on your charts, which you will receive herewith. There are many dangerous shoals and reefs said to exist, and of which we have little accurate knowledge.

The course pointed out is intended to lead you, by the time you reach the coast of Japan, near the South Island.

You will pay particular attention to trying the current daily, if possible; and when running at night, in order to avoid passing over banks, &c., you will get a cast of the patent lead every hour, about forty fathoms up and down. This may be easily done, sailing at the rate of seven knots.

Your dip and intensity apparatus will be used at every island you can find at one hundred and fifty miles apart. I wish a series to be carried across this ocean.

You will pay particular attention to your sailing and keeping together; and when the weather proves fine, spread so as to cover as much space as possible, keeping two good men on the look-out.

There are several reefs lying off Gardner's Island, on its north as well as its south side.

In the vicinity of shoals, or where they are supposed to exist, you will not run at night, taking care not to fall to leeward of their locality.

Any islands or reefs fallen in with must be carefully surveyed to ascertain the extent of their dangers, and you will ascertain also if they afford any supplies of wood and water, whereat a vessel might recruit.

Every three days you will get a comparison with the Oregon's chronometers; and your positions, together with courses, must be represented on your charts.

After you have reached the locality of the islands of Todos los Santos and that called South Island on the chart of Arrowsmith, you will pass directly into the China seas by Formosa Passage, making the north Bashee, and then proceed direct to Singapore, where you will arrive without fail in the first week of February, and there await me or orders.

There are many shoals and reefs which it is impossible for me to draw your attention to particularly; but I desire that you will let no opportunity pass of gaining information relative to every thing that may lay in your route towards the coast of Japan, and that may be useful to our whaling interests.

Wishing you a pleasant cruise,

I am, &c.,

CHARLES WILKES,
Commanding Exploring Expedition.

LIEUT. COM. C. RINGGOLD,
U. S. Brig Porpoise.

XI.

U. S. Ship Vincennes,
At Sea, Nov. 29th, 1841.

Sir,—

You will proceed to Strong's and Ascension Island, survey their harbours, obtain all the information in your power, and at the former make examinations for the wreck of the Waverley.

From thence you will pass to Manilla, through the Straits of Bernadino, where you will arrive without fail by the 10th of January, 1842.

You will run for all islands and reefs lying in your track, and obtain all the information in your power, relative to the supplies they afford; inquire into the character of the white men residing on them, and collect as many curiosities as possible.

You will be particular in your intercourse with the people of Strong's and Ascension Islands, as they are reported to be in possession of a bad set of runaway white men.

All the information you can obtain must be carefully noted.

I shall expect you to execute the duties committed to you with promptness, and I may fall in with you prior to your reaching Manilla; but this will make no difference in your operations.

At Manilla, you will await me or orders. Wishing you a pleasant cruise,

I am, &c.,
Charles Wilkes,
Commanding Exploring Expedition.

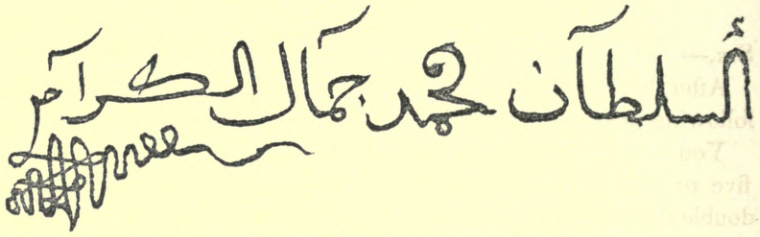
Acting-Master S. R. Knox,
U. S. Schooner Flying-Fish.

XII.

COMPARATIVE STATEMENT OF EXPORTS FROM MANILLA DURING THE YEARS 1840 AND 1841.

		1840.	1841.
Sugar	Europe	119,855 piculs.	98,000 piculs.
	United States	53,100 "	49,600 "
	Sydney	45,000 "	45,000 "
	Bombay, &c.	33,000 "	43,000 "
		250,955 "	235,600 "
Hemp	Europe	15,510 "	18,500 "
	United States	68,280 "	62,700 "
	Singapore, &c.		5,800 "
		"	
		83,790 "	87,000 "
Coffee	Europe	2,854 "	2,027 "
	United States	530 "	137 "
	Sydney		1,726 "
		3,384 "	3,890 "
Indigo	Europe	1,185 quintals.	3,600 quintals.
	United States	2,873 "	3,500 "
	Singapore, &c.		300 "
		4,058 "	7,400 "
Tortoise-shell	Europe	1,365 catties.	1,671 catties.
	United States	874 "	1,540 "
	Singapore, &c.		2,330 "
		2,239 "	5,541 "
Mother-of-pearl shells	Europe	2,840 piculs.	1,894 piculs.
	United States	52 "	287 "
		2,892 "	2,181 "
Hats	Europe	8,110 hats.	4,540 hats.
	United States	3,860 "	7,614 "
	Singapore, &c.	10,610 "	36,713 "
		22,580 "	48,867 "
Hides	Europe	6,071 piculs.	4,549 piculs.
	United States	210 "	712 "
	Singapore, &c.		4,380 "
			"
		6,281 "	9,641 "

XIII.

[L. S.] 

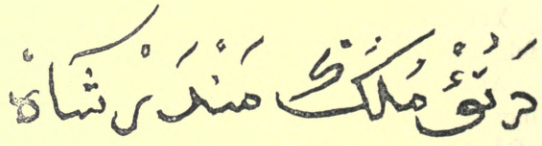
I, Mohamed, Sultan of Sooloo, for the purpose of encouraging trade with the people of the United States of America, do promise hereby and bind myself that I will afford full protection to all vessels of the United States, and their commanders and crews, visiting any of the islands of my dominions, and they shall be allowed to trade on the terms of the most favoured nation, and receive such provisions and necessaries as they may be in want of.

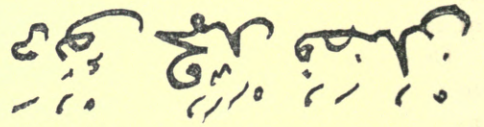
2dly. In case of shipwreck or accident to any vessel, I will afford them all the assistance in my power, and protect the persons and property of those wrecked, and afford them all the assistance in my power for its preservation and safe-keeping, and for the return of the officers and crews of said vessels to the Spanish settlements, or wherever they may wish to proceed.

3dly. That any one of my subjects who shall do any injury or harm to the commanders or crews belonging to American vessels, shall receive such punishment as his crime merits.

In witness whereof I have hereunto set my hand and seal, in presence of the datus and chiefs at Soung, island of Sooloo.

February 5th, 1842.

[L. S.] 

[L. S.] 

Witnesses.

CHARLES WILKES,
Commanding Exploring Expedition.

WILLIAM L. HUDSON,
Late commanding U. S. Ship Peacock.

R. R. WALDRON,
Purser, U. S. Exploring Expedition.

XIV.

U. S. Ship Vincennes,
Singapore Roads, Feb. 26th, 1842.

Sir,—

After leaving the Straits of Sunda, you will be governed by the following instructions, viz.:

You will proceed to the westward across the Indian Ocean, passing five or six hundred miles to the southward of the island of Panaw, double the Cape of Good Hope, and visit the island of St. Helena, where you will lose no time in filling up with water, and proceed from thence to Rio de Janeiro, at which place you will make experiments for dip and intensity, on the island of Enxados, and take on board a sufficient quantity of bread for the passage to New York.

When you arrive at New York, you will cause all journals, memorandums, remarks, writings, drawings, sketches and paintings, as well as all specimens of any kind, to be delivered to you; which, together with your own journal, you will have carefully boxed up and sealed in the presence of two commissioned officers; marked Exploring Expedition, and hold them subject to my orders.

On your arrival at New York, you will find orders from me, or, if I should not have arrived, you will report by letter to the Honourable Secretary of the Navy, sending him a copy of this order.

You are supplied with Six's self-registering thermometer, with which you will obtain the temperature daily, at the depth of one hundred fathoms, when your morning sights are taken; at which time you will note in tables the latitude and longitude, the current (velocity and direction), masthead temperature, deck temperature, and temperature at the depth of one hundred fathoms, and at the surface.

You will examine all shoals, banks, and positions marked "doubtful," that may lay in or near your track.

At St. Helena, you will leave letters informing me of your proceedings, and you will lose no time in making your way to your final port of destination, as it is all-important you should reach the United States at as early a day as possible.

On dropping your anchor in New York Bay, you will pay to each of your crew ten dollars, and suffer them to leave the vessel at once, as their time will have expired; and retain only as many as will volunteer to take charge of the brig.

In the event of my arriving before you, orders will meet you for the disposition of the journals, &c., of which you will take particular care,

placing them in charge of a suitable person for safe-keeping, until farther orders from the Department, or myself.

In passing around the Cape of Good Hope, you will keep a good look-out for ice, as it is sometimes seen at this season.

The enclosed notice of an island off the Cape of Good Hope, will claim your attention; and if possible you may pass over or near the spot, in order to verify or disprove its existence in that position.

Let your stay at St. Helena be as short as possible; Horsburgh's directions relative to making and anchoring at the island, are good.

I herewith enclose you the error and rate of your chronometer, obtained by comparison with this ship's standard, which has been performing very accurately since we left Oahu.

Wishing you a safe and pleasant passage, and a happy meeting with your friends,

I am, &c.,

CHARLES WILKES,
Commanding Exploring Expedition.

LIEUT. COM. C. RINGGOLD,
U. S. Brig Porpoise.

P. S. You will make magnetic experiments at the island of St. Helena.

Similar orders to Lieutenant-Commandant Carr of the Oregon; in a postscript to which, he was required to make experiments for intensity with Gauss's magnetic instrument, at the island of Enxados.

C. W.

XV.

RETURN OF THE POPULATION, AND OF THE BIRTHS, MARRIAGES, AND DEATHS OF CAPE COLONY.

1841.

TOWN OR DIVISION.	AREA IN SQUARE MILES.	WHITES.		COLOURED POPULATION.		TOTAL.		TOTAL.	BIRTHS.	MARRIAGES.	DEATHS.
		MALES.	FEMALES.	MALES.	FEMALES.	MALES.	FEMALES.				
Cape Town	About 9½					9,168	9,552	18,720	600	295	319
Cape Division	— 1,714	2,189	2,464	3,756	3,717	6,571	6,181	12,761	301	97	189
Stellenbosch	— 1,274	3,224	3,163	4,448	3,588	7,672	6,751	14,423	605	284	254
Worcester	— 18,075	2,072	1,972	2,482	2,319	4,554	4,291	8,845	275	90	162
Clanwilliam	— 24,036	1,458	1,328	3,931	3,969	5,389	5,297	10,686	313	38	135
Swellendam	— 7,600	4,910	4,532	4,813	4,431	9,723	8,963	18,686	610	126	254
George	— 4,032	2,905	2,737	2,833	2,807	5,738	5,544	11,282	294	42	11
Beaufort	— 13,050	1,347	1,323	1,266	1,303	2,613	2,626	5,239	127	40	68
Total Western Division	— 69,790½	18,735	17,524	23,529	22,134	51,432	49,210	100,642	3,125	1,012	1,392
Utienhage	— 8,960	2,469	2,159	3,393	2,998	5,862	5,157	11,019	460	195	280
Albany	— 1,792	3,896	3,814	3,032	3,144	6,928	6,958	13,886	1,213	163	356
Somerset	— 6,500	1,616	1,482	1,728	1,613	3,344	3,095	6,439	228	38	48
Cradock	— 3,168	1,511	1,474	1,668	1,636	3,179	3,110	6,289	790	67	197
Graaf-Reinet	— 8,000	1,637	1,726	1,956	1,973	3,593	3,699	7,292	275	44	178
Colesberg	— 11,654	2,180	2,068	1,854	1,791	4,034	3,859	7,893	253	100	113
Total Eastern Division	— 40,074	13,309	12,723	13,631	13,155	26,940	25,878	52,818	3,219	607	1,172
Grand Total	— 109,864	32,044	30,247	37,160	35,289	78,372	75,088	153,460	6,344	1,619	2,564

XVI.

TABLE OF THE VALUE OF BRITISH AND OF OTHER COINS CURRENT AT THE ISLAND OF ST. HELENA, AS ESTABLISHED BY A PROCLAMATION, DATED ST. HELENA, 29TH FEBRUARY, 1836.

SORT OF COIN.	NAME OF EACH COIN.	OF WHAT COUNTRY.	Value of each coin in British Sterling at St. Helena. £	s.	d.	Value of each coin reduced into U. S. Money. $	c.
GOLD	Doubloon . . .	Spain, and South American States, ... N. B.—Half, quarter, eighth, and sixteenth, of proportionate value.	3	6	0	15	23·07
	Joe	Portugal, ...	1	13	3	7	67·30
	Mohur	Bengal (having the star), . . N. B.—Half and quarter, of proportionate value.	1	13	3	7	67·30
	Mohur	Bombay (and every other Mohur), ...	1	10	2	6	96·15
	Moidore, ...	Portugal, ...	1	6	0	6	00
	Sovereign . . .	England, ... N. B.—Half, of proportionate value.	1	0	0	4	61·53
	Napoleon . . .	France, ... N. B.—Double Napoleon, of double value.		15	7	3	59·61
	Ten Guilder . .	Holland, ... N. B.—Half, of proportionate value.		15	7	3	59·61
	Louis d'Or . . .	France, ...		15	7	3	59·61
	Venetian. . . .	Venice, ...		9	4	2	15·38
	Star Pagodoe . .	East Indies, ... N. B.—Double Star Pagodoe, of double value.		7	3	1	67·30
	Porto Nova pagodoe	East Indies, ...		5	6	1	26·92
SILVER	Ducatoon . . .	Holland, ... N. B.—Half, of proportionate value.		5	4	1	23·07
	Crown	England, ... N. B.—Half, of proportionate value.		5	0	1	15·38
	Shilling	England, ... N.B.—Half, quarter, and eighth, of proportionate value.		1	0		23.07
	3 Guilder . . .	Holland, ...		4	8	1	07·70
	Dollar	United States, South American States, and Spain (all alike), N. B.—Half, quarter, eighth, and sixteenth, of proportionate value, except the latter, which loses the fraction, when passed separately.		4	4	1	00

XVI.—Continued.

SORT OF COIN.	NAME OF EACH COIN.	OF WHAT COUNTRY.	Value of each coin in British Sterling at St. Helena. £ s. d.	Value of each coin reduced into U. S. Money. $ c.
Silver	Half Star Pagodoe	East Indies, ...	3 8	84·61
		N. B.—Quarter, of proportionate value.		
	Colonial Piece . .	England, ...	2 4	53·84
		N. B.—Half and quarter, of proportionate value.		
	Sicca Rupee . .	Bengal (having the star), . .	2 1	48·07
		N. B.—Half and quarter, of proportionate value, except the latter, which loses the fraction when passed separately.		
	Rupee	Bombay (and other parts of East Indies), ...	1 11	44·23
		N. B.—Half and quarter, of proportionate value, but lose the fraction when passed separately.		
	Guilder	Holland, ...	1 6	34·61
	5 Franc	France, ...	4 0	92·52
	2 Franc	"	1 8	38·46
	1 Franc	"	10	19·23
		N. B.—Half franc, of proportionate value.		
Copper	Half-penny . . .	England, and various other countries.	½	01
	Cent	United States, ...	½	01

N. B.—The American eagle ($10), half eagle ($5), and quarter eagle ($2 50), are not current at St. Helena, as a legal tender, nor is the dime or half dime.

No paper bank note will pass, except that of the Bank of England.

None of the silver coins of Portugal or the Brazils, nor of the island of Ceylon, nor the German crown or Austrian dollar, are current.

No other moneys but those enumerated in the above table are recognised as a legal tender at St. Helena.

XVII.

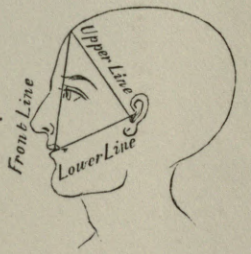
VALUE OF EXCHANGE ON LONDON AND THE UNITED STATES AT DIFFERENT PORTS VISITED BY THE EXPLORING SQUADRON, MADE UP TO 1842.

PORTS.	Amount realized in dollars per £100 sterling exchange on London.	Rate of Exchange on the United States.	Value of Silver Dollars.
Madeira . . .	£100 sells for $460	10 to 12 per cent. disc.	Par.
Rio de Janeiro .	100 " " 440	12 to 14 " "	"
Valparaiso . .	100 " " 520	Par.	"
Lima	100 " " 510	"	"
Sydney, N. S. W.	100 " " 480	10 per cent. disc.	"
California . . .	100 " " 450	12 " "	"
Sandwich Islands	100 " " 430	12 to 15 per cent. disc.	"
Manilla . . .	100 " " 450	10 " "	"
Singapore . . .	100 " " 450	10 " "	"
Cape Town . .	100 " " 444	10 " "	"
St. Helena . .	100 " " 444	10 " "	"

XVIII.

TABLE OF THE MEASUREMENTS OF THE NATIVES OF THE SEVERAL GROUPS OF POLYNESIA.

NATIVE OF	Height.	Facial Angle.	Front Line.	Upper Line.	Lower Line.	Length of Arm.	Length of Collar Bone.	Number of Teeth.	Length of Hand.	Length of Foot.	Circumference of Head.	Number of beats of Pulse in a minute.	REMARKS.
Terra del Fuego . . .	5 ft. 4 in.	64°	3 in.	in.	in.	29 in.	8 in.	32	in.	10½ in.	25 in.	66	About 22 years of age. Pecherai tribe.
Raraka	5 8	72	4¼	6	6¼	34½	6	32	7	10	22	61	Chief.
Tahiti	5 11	70	4	7	7½	30	5	30	8	11½	23	71	Chief.
Navigator's (Eastern) .	5 10	75	3½	8	7	36	6	31	7	10¼	24	65	Native.
Navigator's (Western) .	6 10	70	4½	7	6½	36	7	32	8	11	27	72	Chief.
New Holland	5 2	62	*1½	4¼	6½	30	4½	31†	6	12	20	66	
New Zealand	6 3	75	5	7	6½	36½	7½	32	8	10½	24	67	Pomare (chief).
New Hebrides . . .	5 1	64	3¼	6	6½	30½	5	28	7½	10	11	68	About 13 years of age. Natives.
Tongataboo	6 4	70	3½	7	7¼	36	7	32	4	11	24	66	Native.
Feejee	5 2	63	4	5	5½	32	3½	30	8	10¾	21	67	Native (Kai-si).
Feejee	5 11	67	6	7	8	34	5½	32	7½	11½	22	65	Vendovi (chief).
Rotuma	5 7	77	3½	7	7	35	4	32	8	10	24	74	Native.
Marquesas	5 6½	70	4⅜	6¼	6	28½	5½	32	7½	10¼	22½	66	Native.
Sandwich Islands . .	5 6	72	4	6½	6⅜	35	6¾	29‡	7¾	12	22	66	Native.
Nisqually	5 9	61	4	5	5½	*18¼	4¼	30	7	10½	22	70	Native.
Californian Indian . .	5 4	70	4	6	5¾	*19½	4	32	7	10¾	19	77	Native of Sacramento Valley.
Luzon	4 7	64	*2½	4	4½	27	4	30	6	9	12¾	70	Between 14 and 15 years of age. Native.
Malay	5 6	78	4¾	7	7½	27	4	32	7	11½	22	72	A native of Sooloo.



MEASUREMENT OF HEAD.

* The numbers in the table with this sign affixed are believed to be erroneous, but I preferred giving them as they were, to making any change. The table is from a copy, the original record having been lost.

† One knocked out on his attaining manhood, as customary in New Holland.

‡ Three knocked out on the death of Liho-liho.

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